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CO-ORDINATING LATIN WITH OTHER HIGH-SCHOOL SUBJECTS[1]

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Despite the growing demand that the curriculum of the secondary school should come into closer connection with life, and despite the efforts that are being made to meet that demand, it is nevertheless still true that the isolated departments and subjects of our secondary schools are quite generally ignoring the most obvious and immediate opportunity that is presented for such a development. For the teacher of first-year Latin the most direct line of attack through which the Latin work might enter into the very fabric of the pupil's contemporary intellectual life would seem to be to develop to the highest degree of efficiency the capacity of Latin for service in the other branches of his daily work. The capacity of subjects to serve as tools varies greatly. Latin has this capacity to an extraordinary degree. To convert this potential capacity into actual results requires two things, the absence of which will always prove fatal to any attempts in that direction.

There must first be tangible data just as exact as any connected with the more technical part of the Latin work. We cannot hope that valuable assistance can be rendered by first-year Latin in contemporary biology work unless the Latin teacher has an exact list of those derivatives which are of importance in biology and a knowledge of their biological application. Similarly, the study of the

[1] A paper delivered before the New York State Teachers' Association, Syracuse, December 30, 1913.

general derivatives is at present, because of the lack of definite information, haphazard and confined to the more obvious and consequently less important part of the field. Every teacher will readily, on the spur of the moment, think of "viaduct" as a derivative of *via*, but the word "impervious," a more interesting and more important word, will not arise spontaneously. Exact information must be at hand.

In the second place, the work of co-ordinating the Latin with biology, for example, must be shared equally by both departments. The co-ordination must be reciprocal. The teachers of these subjects must be to that extent Latinized. They must be convinced that it will be in the interest of more thorough work and of economy to require the biology pupils, for example, to give the derivation of a technical word which they know the pupil has already met in his Latin class, and which will be remembered much better through a knowledge of its derivation. Each department can then well afford to go out of the technical boundaries of its subject knowing that, as the assistance rendered is mutual, the pupils have in reality made two applications of each fact learned in the Latin class.

It is obvious that my subject forms but one aspect of the pressing problem of co-ordinating our various departments and reorganizing our curriculum into one interrelated and interdependent whole. Into this comprehensive problem I do not now enter. I shall limit my paper to that portion that concerns the study of Latin and describe the progress that we have made in that direction in the East High School of Rochester, New York.

There are several important fields in which, with accurate data and a keen sense of interdepartmental obligations, the Latin work has been made of great value.

I. *Co-ordination in grammar.*—This field has been carefully worked over, particularly with reference to the English and Latin departments. Our co-ordinating material has been in use for several years and is now in printed form. I have written and spoken elsewhere in full on this topic and will briefly summarize our methods.[1]

[1] *Classical Journal*, VII, 196; *ibid.*, VII, 338; "Introductory Lessons in High-School English and Latin," *Proceedings of New York State Teachers' Association*, 1912.

1. The definite assignment of definite topics to each department to be covered at a specified date at which the material is desired for use in the other departments.
2. Instruction of such a character that the pupil knows that he will be responsible in the Latin class for what he is studying in the English class and vice versa.
3. The review in Latin of each topic taught in English and vice versa.
4. Uniform terminology, which has *followed*, not *preceded*, departmental co-operation.

II. *Co-ordination in vocabulary.*—In this field the aim has been to make every new Latin word bear its full burden of obligation and realize to the full its capacity for service. This has meant a very exhaustive examination of the pupil's contemporary studies and reading. The selection of data has been correspondingly slow, and is the joint product of the Latin teachers and the teachers of other subjects. The latter have in every case taken the initiative in forming tentative lists.

The work divides into two general lines.

A. The study of the non-technical general English vocabulary. This involves close co-ordination with the English Department.

B. The study of the technical vocabulary of the special subjects. This includes only the most important words in each subject. Our co-ordination work includes biology, chemistry, physics, mathematics, the business course, and music. I will describe this work in detail.

A. Co-ordination with the English Department in the study of words.

1. There is a preliminary stage in which the orientation of the pupil is the main aim. The first day in the Latin class is spent in culling from the pupils' previous experience all the Latin words and expressions they have previously met. Such phrases as *terra firma*, *post mortem*, and dozens of others are readily secured. With this list as a clue the pupils are required to search all their English reading, whether newspapers, maga-

zines, or books, for Latin expressions which they quickly develop an ability to recognize. Pupils start notebooks containing as the first section, "Latin Expressions in English," which is later extended to include Latin words in English preserving their original form, e.g., *honor*. Contests are started for the largest number, and clippings or copies are pasted on cardboards which form a tangible object-lesson of the prevalence of actual Latin words in English.[1] These same words are then reviewed in the contemporary English class. There are several valuable results.

a) The importance of the Latin to the understanding of English is given a laboratory demonstration. This lesson is never forgotten.

b) The habit of co-ordination begins to form at once, for the pupil discovers that he is held responsible for everything in two classes.

c) His actual English reading is extended into fields such as editorial writing, with which he was not previously very familiar.

d) From the purely Latin point of view he gets a knowledge of a not inconsiderable number of Latin words, and more than that he learns on the very first day that the study of Latin is not introducing him into a field wholly foreign to his previous experience, but is only the extension of a topic already familiar to him. Thus one of the most serious impediments to the grasp of Latin is removed. Most important of all, from the very first day he acquires the habit of expecting to find Latin about him, of being constantly on the watch for it and for opportunities to use it. The problem of interest is in great measure solved thereby.

[1] One class recently secured nearly a thousand clippings in the first few weeks. They represented one hundred and fifty different expressions. One pupil's notebook contained at the close of the first term nearly three thousand clippings, representing over four hundred different Latin expressions or English words preserving their original Latin form.

2. When after two or three days pupils have acquired an accurate feeling for an actual Latin word in English, the study of English derivatives is begun.[1] The two principles are established that the English derivative must be related (not identical) in form and related (not identical) in meaning. These principles become of even greater importance later in translation work, when they serve to guard pupils from the pernicious habit of translating Latin words by their English derivatives. The Latin words thus far studied are now examined for their derivatives and all these are incorporated in a second list in the notebook.[2] In each case the pupil writes the derivative, the Latin word from which it comes, the meaning of the Latin word, and the literal meaning of the derivative. Work in derivatives involves just as thorough scholarship as any other part of the work. These words are then reviewed in the English class in a spelling test.
3. After this preliminary work of about two weeks, a comprehensive plan of co-operative study is begun. With the co-operation of Mr. Ernest R. Clark, head of the English Department, we have sought to compile a list of the most significant 5,000 English derivatives from the Latin. This list when entirely complete, will be divided among the four years of high-school work. They are taken up first in the Latin classes in connection with each day's new vocabulary and are then reviewed in the English class. Printed papers are issued to the English teachers week by week, giving the words to be covered each week.

Paper 1 has the following introductory statement:

> With this paper you begin a systematic study of the derivation of English words that will continue during your entire English

[1] It will be understood that only a small part of the class time is devoted to this series of topics. I ignore the rest of the work for the present, and abstract only such material from each day's work as bears upon the topic.

[2] The members of the same class mentioned before had an average of over five hundred derivatives so analyzed in their books at the close of the term. The notebook is a laboratory, not a record.

course in high school. The most important element of our English language is Latin, and, as the majority of the pupils study Latin, the work will follow the order of words learned in the Latin classes. Each week you will take up in your English classes the words discussed the previous week in Latin.

This first paper differs from those that follow. It will be simply a spelling test on all the derivatives met so far in Latin. All of them will be met again later and analyzed in detail.

Paper 2 has the following general instructions:

The method of procedure given here is to be followed in the study of all future papers:

1. Observe carefully the meaning of the Latin word.
2. Learn on this basis the real meaning of each derivative and distinguish between synonyms derived from the same source.
3. Observe the assistance rendered in spelling (indicated by the black-face type).
4. **Use all these words at your first opportunity, systematically.**

Paper 8 is reproduced in full. It shows the plan fully. The following points may be noted:

1. The Latin word is given with its meaning.
2. Simple derivatives like "labor"[1] are included without explanation.
3. More important derivatives, like "agrarian," "danger," are accompanied by a context taken either—
   a) from general contemporary usage;
   b) or from the authors read in the English classes. Thus the word danger, a derivative of *dominus*, occurs in the original meaning in the 6th chapter of *Ivanhoe*, read by our English classes in the first term.

PAPER 8

AGER, field: agrarian=pertaining to fields or farms, "agrarian laws."

AGRICOLA, one who cultivates fields, a farmer: agriculture=cultivation of fields.

AMICUS, friend: amity, "to dwell together in amity"; enmity (*in*=not), "The dislike grew into enmity."

BENE, well: beneficent=doing good, kind, "a beneficent institution"; beneficial=doing good, "beneficial treatment";

[1] No effort is made at this early stage to be exact as to whether "labor" comes from *labor* or *laboro*. This is developed later.

benevolent = wishing well, kindly, "a benevolent disposition"; benefactor = one who does well, "a benefactor of humanity"; benediction = a speaking well, a blessing; benison = same derivation, "Good night and our Lady's benison."

MALE, badly, ill: malevolent = ill wishing, "a malevolent glance"; malefactor = one who does ill, a criminal; malediction = a speaking ill, a curse, "To utter a malediction"; malison = same derivation, a curse.

DOMINUS, master: dominie = "Master," the vocative case preserved as an English word; don = a Spanish title "Master"; dominate = to be master, "to dominate the class"; dominant = having mastery, "the dominant party"; domination = mastery; domineer = to play the master, "He domineers over his fellows"; dominion = mastery, authority, "dominion over the sea"; domain = mastery, control, territory controlled, "His broad domains"; danger = mastery, power, then peril; dungeon = mastery, power, then prison, "Spare the dungeon to some Christian who stands in thy danger"; predominant (*prae* = before) = having the mastery before (others), "He exercised a predominant influence."

DONUM, gift: donate = to give, "The society donated ten dollars"; donation = a giving, gift; donor = giver, "The donor of the new art building"; condone (*con*, intensive) = to give completely, to yield, forgive, "to condone a fault"; pardon = (*per* = intensive) to give completely, forgive, "to pardon a crime." (Observe that "forgive" is derived from "give.")

HORTUS, garden: horticulture = cultivation of garden.

LABORARE, work: labor = to work; elaborate = to work out, "to elaborate a theory"; elaborate = worked out, "an elaborate design," i.e., worked out in all details; collaborate = to work with, "to collaborate with another in writing a play"; laboratory = a workshop.

The first 30 papers follow this plan. Paper 31 begins a study of the Greek element in English, contemporaneously with the learning of the Greek alphabet in the Latin classes. The six introductory papers in Greek derivatives are so arranged as to be an introduction to Greek history and are so used the next term. The completed plan will involve 160 papers containing from 30 to 40 words each. One of our greatest difficulties has been the complete absence of any dictionary giving alphabetically the chief Latin contributors to our language followed by all the derivatives from them. Thus there is no

place where one could get a complete list of the derivatives from *dominus* from which to choose the ones desired. We have been compelled actually to construct such a dictionary by a card catalogue made directly from the dictionary, a task of infinite labor.

The results of such a training are manifold and develop consistently with those indicated in the preliminary work.

1. The pupils get a persistent and systematic training in the fundamental habit of co-ordinating newly acquired facts with their contemporary life.

2. They get a good grip on the basic meanings of 5,000 words.

3. By the habit formed of using the Latin they get the ability to solve many thousands more not included in the list.

4. They get daily practical use for their Latin, and thus both strengthen their Latin vocabulary itself through exercise and get an ever deepening insight into the significance of their study of the language.

B. Co-ordination with subjects other than English.

1. Biology.[1] Here with the co-operation of Miss Nellie G. Prescott, head of the Biology Department, a list containing the important biological words derived from the Latin has been made up. It is now in use in our first-year classes. The derivation of every word on the list is asked for in both the Latin and the biology classes. The list begins as follows:

Eng. Word	Derivation	Occurrence
accessory	*cedere*, to go, *ad*, to=to do to or with, to accompany; e.g., accessory buds or muscles	*Cat.* i. 19[2]
adherent	*haerere*, to stick, *ad*, to=to stick to, to be united (of parts normally separate)	*Cat.* i. 13

[1] For the complete biology list see *Classical Journal*, IX.

[2] The references indicate where the word may be found first in our high-school texts. The words are reviewed again at that point.

2. Physics.[1] This was the first list to be completed. Each pupil receives a copy of it at the beginning of the physics course and the procedure is the same as in biology. The list was made up with the co-operation of Mr. Charles E. Harris, head of the Physics Department. It is studied in the third year. The list begins as follows:

Eng. Word	Derivation	Occurrence
aberration	*ab*+*errare*=wander from	*Cat.* ii.6
acceleration	*ad*+*celerare*=to hasten to	*Ver.* i.357

3. Music. With the assistance of Miss Eunice Ensor, who is in charge of the music, a list of musical terms derived from the Latin was compiled and is now in use in the music and Latin classes.
4. The lists in chemistry and mathematics have been compiled with the assistance of the heads of these departments, Miss Jane P. Hanna and Mr. William Betz, and are in operation in the Latin classes. They will shortly be put into the classes of the other subjects also.
5. A list has been formed with the assistance of the head of the Commercial Department, Mr. Roy E. Davey, and is now in operation there. This completes the technical lists.

III. *Co-ordination in subject-matter.*—In this field we have done little but sketch out the plan. It involves co-ordination with history and English. In history the report of the committee that has worked on the problem outlined three points of contact. The first involved an agreement as to specific passages in Caesar, Cicero, and Vergil, the historical significance of which the Latin teachers will emphasize and to which the history pupils will be referred as original sources within their reach. The second involves the determination of the main historical lessons to be drawn from Caesar and Cicero and the definite review of this material by the history teachers. The third involves an institution found in comparatively few high schools, a fully developed Roman state. The activities of this organization are used as object-lessons in the history classes.

[1] For the complete physics list see *Classical Journal*, VIII, 6, p. 244.

The co-ordination with English involves an agreement upon a list of books pertaining to Greek and Roman life which all Latin pupils will read and count as part of their prescribed English reading. A tentative list divided among the four years has been made.

Co-ordination must not be confused with correlation in its technical sense. It does not involve the *selection* of subject-matter because the same subject-matter has been used elsewhere. English pupils do not systematically write themes on subjects connected with the Latin or biology. Our work in co-ordination allows each subject to follow its own natural genius, merely insisting that every fact learned in one class should be consciously made use of as apperceptive material when occasion arises to employ that same fact elsewhere. All the territory common to both subjects should be marked out and be perfectly familiar to the teachers of both subjects. Everything in this field should then be taught in each class with distinct recognition of its previous or subsequent appearance in the other.

VOCATIONAL GUIDANCE IN HIGH SCHOOL

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The importance of giving some direction to the youth of today in his very difficult task of finding for what occupation in life he is suited, and the necessity of keeping him, if possible, from drifting into work unintelligently, have led us, in the DeKalb Township High School, into a definite scheme for vocational guidance. This paper presents suggestively the outline we have used for this work.

For purposes of description we may divide our work in vocational guidance into three departments: first is what might be called the general survey work with a class of pupils; second, the investigation of industrial conditions in the community; and, third, detailed work with the individual pupil in the endeavor to make as definite as possible the conditions, requirements, and opportunities in a given occupation.

Let us take up our work in DeKalb along these three general lines. In the survey work, the principal meets a class in the morning assembly once a week and presents the problem to its members with the following aim: namely, to impress upon the student the importance of a careful choice of his work and the necessity of an accurate knowledge of the various occupations, both that he may decide whether he is fitted to succeed in the particular line of work that he selects, and also that, before plunging into a given occupation, he may fully understand the social conditions which will surround his work, his opportunities for advancement, and the social position into which he would necessarily be brought.

The outline as given above may cover two or three talks. The plan is to give the student next, as it were, a bird's-eye view of modern industry considered as related groups, and to discuss these various groups with reference to their fundamental characteristics. This general view corresponds to what might be accomplished by taking a boy through various typical industries and pointing out

their characteristic points. It is something akin to what Franklin's father did when he took his son to see men at work at various occupations so that the boy might make a more intelligent choice of an occupation.

The groups used for discussion are adapted from the classification of industries as reported by the Census Bureau and are as follows: (1) mercantile or selling industries, covering retail stores, wholesale selling; (2) the manufacturing and the building industries, including the metal trades, woodworking trades, carpentry, and the like; (3) the transporting industries, principally the railroads; (4) extractive industries, agriculture, forestry; (5) banking; (6) (*a*) the professions, law, medicine, teaching, etc.; (*b*) artistic professions, music, art, acting, etc.; (7) government service, consular service, postal service, army, etc.; (8) personal service.

In treating these general groups we consider largely those industries which are found in our community. For instance, in the manufacturing industries, not having the textile industries at hand, we do not consider them except to mention them briefly, but give our time to the steel industry, gas engine works, etc.—industries which are represented locally.

Space will not permit a discussion of all these groups of industries. However, a discussion of one of them more in detail will help to show the general method of treatment.

In our work at DeKalb we begin with the mercantile industries, or the problem of selling goods, and discuss it from the point of view of the clerk, which probably will be the position open to boys and girls going into the local stores. By way of introduction we try to show that the selling of goods is really the controlling end of industry, and is, therefore, one of the fundamental aspects in modern business. It is then pointed out that there are five fundamental points to be considered in the make-up of the salesman, which may be stated in general as follows:

1. A salesman must have a pleasant personality, be easy to approach, and able to approach others. In a word, he must be a good "mixer." On the reverse side, he must not be grouchy or cranky, else he will drive away trade in spite of other good qualities which he may have.

2. A salesman must be a ready talker. He must be able to get

attention; to be at no loss for words, and able to talk persuasively and convincingly.

3. A salesman must be, to some degree, observant of people and a judge of human nature. He must size people up as to the quality of goods that they will probably buy. He should, for instance, show the customer goods suited to his pocket-book and appealing to his taste. He must be quick to realize whether his arguments are appealing to his customer or not, and he must know how to change his talk, when it does not appeal.

4. A salesman must know his goods thoroughly, their advantages and peculiarities. That is, he must study the goods which he handles, know what they are made of, what their good qualities are, and what they may be used for. He must study his competitors' goods in the same way.

5. He must have enthusiasm for his work and for his goods. It is this enthusiasm which makes trade.

As to pay, opportunities to advance, etc., we consider briefly the clerk in the small store; dry goods, grocery, etc.; the clerk in a department store; the salesman on the road.

In general we can say that there is always a demand for a good salesman and that the man who makes a record by his sales is sure to receive attention and promotion. Attention also is called to the fact that as a rule there is more money in the selling end of the business than in the manufacturing or the accounting end.

We note, also, that the conditions under which a salesman works usually are good. On the other hand, there are certain conditions of strain, due to the fact that the clerk must be on his feet all day long, must work overtime at rush seasons, etc., which may be counted as drawbacks in the work.

As concrete examples of men successful in the selling end of business we have the well-to-do men of our town. These are men who have made a competence because they knew how to buy and sell. The great merchant princes of modern times, Marshall Field, P. D. Armour, A. T. Stewart, and others, furnish great examples of successful selling.

Sometimes a student asks how he can determine whether he has any talent for selling goods. In the first place, a plan is recommended that is a rather severe test of selling ability: canvassing

for articles which are sold from house to house. This sort of work will tell quickly whether the individual has the personality, the ability to talk readily and easily, and the power to put up a convincing and persuasive argument. The work is hard and trying, but it will test selling ability thoroughly. Another way suggested is to obtain a clerkship in one of our stores during the summer vacation. Here, again, one can test out personality, conversational ability, judgment of human nature in the interesting problem of selling goods.

I have found that articles in the leading magazines furnish excellent material for use in these talks. For instance, one frequently can illustrate a point by reading a portion from the articles on business which appear from time to time in the *Saturday Evening Post*, *Collier's*, and the *Outlook*. In order to make this material readily available, I have made up, from time to time, a large and useful scrapbook, which contains material of this sort.

When the discussion of the groups of occupations is completed, a change is made in the plan of the work. So far we have been taking up the demands of particular occupations. The plan now is to discuss with the students those personal qualifications which are necessary for successful work, not in one, but in any line of endeavor. As might be expected, the moral qualities come decidedly to the front and the discussion is largely a treatment of practical ethics. Our experience shows that in its effect on individuals the treatment of the subject from this point of view is decidedly worth while.

In this part of the work we take up personal qualifications under the six general heads, personality, health, mental ability, character, friends, and loyalty. Personality, for example, is discussed as made up of such elements as voice, dress, manners, tact, etc. Time will hardly permit considering these heads in detail, but, in all, the point is made that youth is a plastic period in which may be developed certain designated characteristics most advantageous to the individual in his dealings with other people in the world of business.

We must leave the survey work with this hurried consideration of it and take up some of the other topics which form part of the work in vocational guidance.

Vocational guidance is more effective when based upon some knowledge of the vocational plans of the students. As a result of the vocational survey of our school we found the following facts: 23 per cent of all the students, or 50 per cent of the girls, were planning to go into teaching; 30 per cent of our students had made no choice of an occupation; 10 per cent were planning to go into bookkeeping and stenography; 8 per cent were going into agriculture; 5 per cent of the boys were planning to go into engineering; in all, twenty-four different occupations were represented.

Several things of value were a result of this survey. First, we now see that we are, in a way, a preparatory school for teachers, and we can adapt our work to some degree with this end in view, advising girls as to the opportunities in teaching, the preparation, etc. With 30 per cent of our students undecided as to an occupation we have a definite problem to supply them with some means for a decision. With 8 per cent of our boys going into agriculture we feel that our courses in this subject are worth while. In general, the light which was thrown on the planning of our curriculum by this investigation repaid us many times for our work.

In following out our vocational work, we found that to make it most worth while we must have a better knowledge of our community on its industrial side. We must know definitely such things as the pay, the conditions of employment, the opportunities for advancement, etc. To this end we undertook a vocational survey of our industries. We used several blanks in getting the necessary information. We used one for the commercial business, one for manufacturing business, and another for agriculture. The men in charge of these departments in the school obtained the information to fill out these blanks. I give herewith our commercial blank (p. 232).

Some of the results of our investigation were as follows: In the commercial lines the great majority of employers asked that boys be trained thoroughly in three things, penmanship, spelling, and arithmetic. Although a few asked for training in salesmanship and some for trustworthiness, these three items were all that was asked of the school. This, certainly, is a simple training for the school to give. On the trade side we found, likewise, that the majority of the shops did not ask for a very high degree of skill.

In general, again, three things were asked for: a boy should be able to run a drill press, read a mechanical drawing and a micrometer caliper. The foremen stated that they expected to put the boys on simple work and they would give the boys such training as was necessary.

DEKALB TOWNSHIP HIGH SCHOOL

Boys Date————————191

FACTS ABOUT EMPLOYMENT

1. Do you employ boys (under the age of 20)?.....About how many?.....
2. What do you employ boys to do? .....
3. Boys at present employed (or previously employed) you have found deficient in:
(Please underscore subjects in which boys are lacking.)
School work.—Arithmetic; Rapid Calculation; Bookkeeping; Penmanship; Spelling; English; Office Training; Salesmanship.
Character.—Obedience; Moral Ideals; Loyalty to Firm; Trustworthiness; Promptness.
Personality.—Courtesy to Patrons; Cleanliness of Person; Neatness.
4. Aside from the subjects indicated, what would you like to have boys trained in?
.....
.....
5. About what do you pay boys per week to start?.....
6. What opportunity is there in your business for their advancement?.....
.....
7. Do you think there is need for a night school in this city for the training of employed boys and men? .....
8. Do you employ men (above the age of 20)?.....About how many?.....
Are they skilled or not?.....What do you employ men to do?.....
9. What are the chief requisites for a good workman in your line of business?
.....

Name of firm .....
Line of business.....
Information given by.....
Information secured by.....

(This information is for the use of the high-school authorities only, and will be considered strictly confidential.)

As to pay, we found that in general it was low, varying for girls in the commercial work from $4.00 a week for beginners up to $8.00 a week for girls with experience; and for boys, from the same minimum up to $10.00 a week. In some trades as high as 19 cents an hour was paid.

In general, our survey showed that there is not, in our town, as much of a demand for trained beginners as we had thought. The

problem faces us, whether we shall leave our boys unskilled for the jobs that are open to them, or whether we shall endeavor to train them for positions in the larger towns. We found, also, that there are few positions open to the boy and that promotion is quite slow. This is the reason why so many young fellows seek employment in the larger cities. In general, our survey has raised some critical problems which we must face, though the answer to them is not at all clear.

Finally, the work in vocational guidance must culminate in help to individual pupils in the choice of an occupation. Let us see how this works out. From the survey work, the pupil is given some general idea of the scope and range of business. He sees, in the large, the ability and training required for success in any of the given groups of occupations, and he can choose more intelligently the general direction in which he wishes to go. When he has decided upon a particular occupation, the school has, from its community investigation and in its library, detailed information as to the amount of training needed, the probable pay, the conditions of employment, the opportunities for advancement, etc., and the individual can prepare himself with a clear idea of the conditions into which he is to go.

For example, in our manual-training work, we ask the boys taking machine work to read up on the industrial status of that occupation—for instance, boys in woodworking, on the conditions in the woodworking industries. Thus definite information is given the individual on his prospective occupation. Likewise, more intelligent direction can be given a student as to his choice of courses when one knows the occupation which he has chosen. Boys preparing for medicine, engineering, or law, etc., can be asked to take the appropriate courses in preparation for these professions.

Finally, in aiding individual students we find it worth while to keep track of them with reference to placing them in positions. We let our employers know that we are, in a way, an employment bureau, and that we will endeavor to supply them with efficient help when called upon. Likewise, our students realize that the school is an avenue to employment, and that a good school record is a valuable asset in obtaining a position. This reacts toward better work in school. We endeavor also to keep a record of a

student's characteristics and vocational abilities upon a permanent record card in order to have data for recommendations.

As to the field of work of the vocational counselor, our experience has shown that it consists in placing the information upon which a decision can be based before the individual and requiring him to decide, and not in analyzing the individual and then making the decision for him. In the present state of psychological and social analysis, we are not in a position to make such an important decision for the individual, except along general lines. We have found that the vocational counselor does his best work as an adviser and guide rather than as an arbiter.

In conclusion, let us state briefly what our experience has shown as to the value of vocational direction in the high school. First, while it is admittedly no panacea for all the difficulties in the choice of an occupation, we have found that it is decidedly helpful to the pupils in general by reason of the fact that it brings into mind the importance of the choice of a vocation, and, by helping students to understand something of the industrial opportunities about them and something of the skill and training needed in particular occupations, a more intelligent choice of a life-work is brought about. Thus some social saving results through getting individuals into occupations for which they are fitted. Secondly, there is a decidedly beneficial reaction on the school and school spirit because of the work. Through it the pupil gets some of the ideals which are necessary for efficient work in life and this cannot help but react toward more efficient work in school. Finally, I believe the work justifies itself in a very large degree because it brings the school into rather intimate touch with business needs, business ideals, and business men, and this is certainly worth while.

A WORKING BIBLIOGRAPHY

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THE REORGANIZATION OF SECONDARY EDUCATION IN NEW HAMPSHIRE. II[1]

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III. THE TYPE OF RURAL HIGH-SCHOOL PLANT

A new type of rural high-school building is being evolved which is especially adapted to carrying on industrial courses in agriculture and domestic arts. The school plant of one school which has undergone transformation in the last four years and has had an entirely new building constructed is mentioned to show the trend of affairs in this connection. Four features of this school plant are important, as they will belong to every rural high-school plant when these schools are fully readjusted to the needs of the community. These features are: (1) the greenhouse; (2) the dairy laboratory; (3) the domestic-arts department; and (4) the shops, including a carpenter shop and a blacksmith-shop.

Located on the south side of the building and connected with it by a covered passage is a greenhouse for use in connection with the courses in agriculture. It is 28 feet long and 18 feet wide. The greenhouse is heated by a special hot-water heater in the basement of the main building. The greenhouse contains soil benches around the walls on four sides, and a center bench with soil to the depth of 6 inches for experiments and for growing plants. In the greenhouse much practical work is done in connection with the study of the elementary principles of plant life, soils, fertilizers, the selection and testing of seeds, the care of plants under glass, and, in fact, in nearly all of the work in agronomy and horticulture. The use of the greenhouse makes it possible to do a large amount of practical laboratory study in connection with these two courses. The cost of the greenhouse was $500; the heating apparatus cost $250 additional.

The basement of the main building contains a dairy laboratory with cement floor, cabinets, tables, water connections, and suitable

[1] Continued from *School Review*, XXII (March, 1914).

apparatus. The equipment includes a Babcock milk-tester, a De Laval separator, a Sharples separator, and $200 worth of other apparatus.

The kitchen and dining-room are located on the third floor. The kitchen is provided with two cooking-tables so placed as to form an oblong with openings at each end. It will accommodate a cooking class of twelve girls. The room also contains a modern range and hot-water boiler, a porcelain sink, a large dish cupboard, and ample drawer room. The sink is provided with both hot and cold water. The cooking-tables are so constructed that each girl has the use of two table drawers, and below them a cupboard. Each student has individual equipment for her own use. Adjoining the kitchen is a commodious dining-room adequately equipped for serving. The equipment for cooking and serving is as complete as would be found in the home of a family of average means. More would be unjustifiable.

The old school building, which is situated just back of the new building, is used for shops for the two courses in farm mechanics. One, the forgeshop, is located in the basement and is designed and equipped for teaching forging and farm blacksmithing. The other is the woodshop and occupies the first floor; in it a year's work is given in woodwork and farm carpentry. The carpenter shop is equipped with woodworking benches and a set of tools for each, and a general set of tools for the entire shop. The forgeshop is equipped with hand forges, anvils, vises, and blacksmith tools, including a blacksmith's tap and die set. In these shops the boys in the agricultural curriculum have daily practice in woodwork and farm carpentry and forgework and farm blacksmithing throughout two years.

IV. CURRICULUM IN MECHANIC ARTS

A program of studies has been developed in one of the smaller industrial cities in the state which seems to illustrate the kind of educational organization which is growing up in communities of this sort. So attractive has this proved to the students that the enrolment in the high school has increased in six years from 53 to 383. The program of this school consists of mechanic arts, domestic arts, commerce, and liberal arts. The large emphasis in the

mechanic-arts work is upon the educational value aspect rather than upon an attempt to develop specific skill in some particular vocation. Great stress is placed upon the development of mechanical intelligence and adaptability. It is held that whenever, by frequent repetition, any act becomes automatic it has thereafter little educational value. On account of this fact, many schools make the mistake of providing too elaborate equipment in the way of machinery so that the educative value of the work in mechanic arts is minimized.

The standard mechanic-arts curriculum of the state is outlined as follows: first year, algebra, English, biology, mechanical drawing, carpentry and wood-turning; second year, geometry, English, a modern language, pattern-making, molding and casting, forging; third year, physics, English, a modern language, machine-shop practice; fourth year, English, American constitutional history, chemistry, machine-shop practice.

Carpentry and wood-turning are not taught as a series of formal exercises but center around project work of considerable complexity. It is held that the skill needed in the various manipulations can thus be developed in a more economical manner. Mechanical drawing, constructional plane geometry, and constructional descriptive geometry are continued throughout the four years, although only one formal course in mechanical drawing is given in the first year. Elementary cabinet-making[1] is taught in the first year, and the pupils make tables, drawers, cabinets, drawing-boards, tee squares, bookcases, type cases, cabinet work for the physical and chemical laboratories of the school, appliances for the shop, such as screw clamps and tool cabinets and laboratory accessories. In doing this work practice is given as needed in measuring, sawing, planing, nailing, boring, chiseling, and gluing, all of which are exercises belonging to this kind of work. The fundamental principles of woodworking, as for example the making of mortise- and tenon-joints, are taught wholly in connection with projects and when needed.

In one of the high schools a complete set[2] of patterns for a speed lathe and the frame of a band-saw was made after some prelimi-

[1] Morrison, *New Hampshire School Report*, 1907–8, p. 283.

[2] *Ibid.*, p. 284.

nary work in making patterns of such things as pulleys, washers, and collars. "The problems involved in pattern-making are among the most educative of all school activities. Will the pattern 'draw'; must it be cored; is the design one that is practical from the molder's point of view? The first year's work with hand tools along straight lines and the second year's work with the lathe and its curved lines come together in pattern-making to the great delight of the pupil."[1] Many patterns are made and molded and after being cast and the processes of lathing, milling, and drilling are undergone, they become articles of practical use around the school or in the homes of the pupils. Forging is taught from the same point of view. Cold chisels, punches, lathe tools, iron links, rings for laboratory ringstands, bolts for fastening work to the table of the milling machine are some of the articles made.[2] Extensive use is made of the engine lathe.

The third and fourth years are devoted to machine-shop practice.[3] The work of these years is particularly rich in material for projects and they may be of such a character as to involve all previous work. This work opens up a wide field of applied mathematics which is one of the most valuable parts of the courses from an educational point of view. The experience of one school clearly demonstrates that work of this kind may lead to a higher form of applied mathematics than any ever before thought possible in a secondary school. The object is not to get a mechanical equivalent for thought but the aim is to enable the student to understand the formulae and the machines which he uses. The projects here involve such things as steam and gasoline engines, dynamos, motors, and lathes. The second year of machine-shop practice is devoted entirely to projects of considerable complexity. One high school reported having made last year four twelve-horse-power gasoline engines, one eccentric, two emery grinders, two six-horse-power gasoline engines, and one three-horse-power gasoline engine.

[1] G. H. Whitcher, quoted in *New Hampshire School Report*, 1907–8, p. 284.

[2] Morrison, *New Hampshire School Report*, 1907–8, p. 285.

[3] For this whole subject see: (1) *Standard Program of Studies for the Secondary Schools of New Hampshire*, 1912, pp. 166–70; (2) Morrison, *New Hampshire School Report*, 1911–12, pp. 224–53.

V. RECONSTRUCTED PEDAGOGY OF THE SECONDARY SCHOOL

Equally as important as the reorganization of the secondary school by the adoption of the newer curricula is that which involves readjustments in its pedagogy. Extensive changes are taking place in this field as well which amount to an almost complete reorganization of secondary methods of instruction.

No better example of the changes which are taking place in the teaching of secondary-school subjects can be found than that of instruction in Latin. Until recently the practice has been to give, in the first year, a very large amount of instruction in formal grammar and devote a good deal of time to memorization of forms independent of their use in reading. The new conception of Latin teaching which is taking form is that the pupil should be introduced to the subject, not by a systematic study of the grammar of the language, but by gaining a wide acquaintance with form and usage by reading the language extensively from the beginning. Several schools in the state have reorganized their Latin teaching on this basis and wherever the method has been tried under conditions at all favorable to its development a considerably greater power to read Latin has been developed and as a result a very much greater amount of Latin has been read in the school course.

This new method rests heavily upon the fundamental principle that the pupil can best be taught to read Latin only by reading it extensively and acquiring familiarity with forms and constructions and facility in their use by continually meeting them in their functional relations in sentences. For this reason the pupils begin to read Latin at once with no preliminary study of grammar. In order to read efficiently the individual must have a large vocabulary of words, phrases, and idioms which will function automatically in a reflex manner. Therefore, a valuable adjunct to the early reading is an abundance of quick-perception drill on words by the use of perception cards. The real principle underlying this new method is set forth by O'Shea in the following terms: "But in reading one may be able to use the sentence without being aware of its mechanical properties. It is a simple fact that one may react to grammatical forms without being able to describe them or place

them properly in a grammatical system."[1] It is a matter of common knowledge that children will learn to read efficiently and to talk correctly and not know a single fact of grammar. In fact, the only rational place for the study of grammar is after language has been mastered. The only natural and normal method of learning any language is to use it for a long time before its grammar is studied. A grammatical principle is of no value unless it generalizes a broad experience on the part of the pupil.

This whole discussion thus far may be summarized in one principle: it is entirely possible to learn to read a foreign language without first mastering the science upon which it is based, and, indeed, it may be learned in this fashion more economically and more expeditiously. Teachers of the classics, recognizing the force of these facts, have adopted a new point of departure and a new method of procedure in teaching to read the ancient languages.

The first step in Latin instruction in this new method is to teach a few common words and then proceed to use them at once in writing sentences upon the board for the pupils to read. The first lessons are taught entirely from the blackboard without the use of a book. Many sentences are written and read during each period. Such explanations in relation to form and construction as are essential to the progress of the reading are made orally by the teacher. New forms and constructions are always presented for the first time in sentences, and the pupil learns to react to them correctly by frequent repetition, and at this stage of his learning he is not required to describe or classify the various forms which he meets. This is an important part of the underlying principles of this method of Latin instruction—learning to react correctly to forms and constructions by using them constantly in sentences and reacting to them in perception card drill. All the forms which come within the scope of first-year Latin are learned in this way easily during the year. No attempt is made to have forms appear in any particular order. For example, *laborat* may be the first form of this particular verb to appear, and when the pupils have translated it and several other like forms correctly a number of times they always thereafter react to similar forms correctly. In

[1] M. V. O'Shea, *Linguistic Development and Education*, p. 309.

the same way the accusative or genitive of a noun may appear before the nominative. In a word, the object is to teach the pupil to read by reading extensively, and to lead him to react correctly to grammatical forms by wide experience in using them without making him focally explicitly conscious of a multiplicity of minute particulars of form and syntax which is fatal to the best development of reading-power. Each sentence at the beginning is pronounced clearly and distinctly by the teacher and the pupils repeat after him, several times at first, thus learning pronunciation in a rational manner from the lips of the teacher by imitation. After a few days of this practice the pupils begin to pronounce for themselves and do so independently thereafter under the guidance and direction of the teacher. Each lesson at first is read and translated several times so that each pupil gets abundant practice in reacting correctly to the various forms.

Each day a number of words, phrases, and idioms are printed on white cards of stiff material four inches wide and nine or ten inches long and a few minutes of very rapid quick-perception drill is given on these words. After a large supply of cards has accumulated the teacher uses fifty or sixty today and the same number tomorrow, but different cards, and so on until he has gone through the list of five or six hundred or more. He keeps going over these again and again and the drill is made very rapid. As fast as pupils can respond instantly and automatically to a word it is dropped out of the list for a time as new words are added. This drill is extremely valuable in developing a vocabulary and adds to efficiency in reading as nothing else can. Thus forms are first developed in sentences and in no logical order and made automatic by drill and by constant reading. In the perception-card drill the pupils respond to the form that appears on the card with the proper translation, whether it be a verb form, a noun, a phrase, or an idiom. The pupil never learns the declensions in order, but when *nautorum*, for example, appears on the cards the pupil responds by saying *of sailors*. If *laudat* appears he responds with the meaning, so with *laudamus* or *laudo*. If two meanings are possible he gives both. The work continues in this fashion with reading from the blackboard and perception-card drill with no emphasis whatever on

grammar and form. It is found that after a given form has occurred several times in the reading-lesson the pupils are able to react to it correctly, although they could not describe and classify it. The entire emphasis is put on the thought to be obtained from the Latin.

After about a month the class is able to begin to read from books. Many schools have for the use of their first-year class sets of several good beginners' books and several books of very easy connected Latin stories, a half-dozen or more in all. After a month of blackboard reading, the class can begin to read the easiest connected Latin stories which are usually found in the earlier parts of the beginners' books. A good deal of this kind of reading is done from now on and still new forms and constructions continue to be met and enough explanation given to enable the pupil to use them. At the middle of the year the pupils are reading intelligently connected Latin stories like those found in Collar, *Gradatim*, or Ritchie, *Fabulae faciles*. By the end of the year the pupils have read the equivalent of the amount of Latin in four or five ordinary beginners' books, have met and become acquainted in actual reading with all the forms included within the field of first-year Latin, have a large vocabulary acquired from extensive reading and perception-card drill, have the ability to read easy Latin with a proficiency never gained under the old method, see some meaning in Latin study, and enjoy the study of Latin. Nearly all the reading is done at sight in class.

The same general method is pursued in the other three years. Whatever grammar is taught in these years is presented through prose composition in which one lesson a week is given. Nearly all of the Latin is read at sight throughout the course. In the Senior year a thorough study of the fundamental principles of Latin grammar is made. This is meaningful to the pupils for the reason that concrete experience in using the language has preceded the abstract study of the science upon which it is based.

The reports of work accomplished by a few typical schools will indicate the manner in which the method is succeeding.

One school reports that the amount of reading done in the first year has been the equivalent of the amount found in five average

beginners' books. In the second year this school read Caesar's *Gallic War*, Books i–iv, and fifteen lives of Nepos. Three-fourths of this was at sight. In the third year the same school read Cicero's four orations against Catiline, the orations for the Manilian Law and for the poet Archias, all of Cicero's *De senectute*, half of Cicero's *De amicitia*, and twenty selections from Post's *Latin at Sight*. Seven-eighths of this year's work was done at sight. For the work of the fourth year the class read six books of Vergil and fifteen hundred lines of Ovid with three-fourths of the reading done at sight. Prose composition occupied one day a week throughout the course.

Another school which begins its Latin in the last half of the seventh year read in nineteen weeks the equivalent of Ritchie, *First Steps in Latin*, Ritchie, *Second Steps in Latin*, and Inglis and Prettyman, *First Book in Latin*, the first forty-three lessons. In the eighth year this school read: Ritchie, *Fabulae faciles*, entire; twelve selections from Collar, *New Gradatim;* D'Ooge, *Life of a Roman Boy;* twelve lessons from Latin dialogues; Books i, ii, iii, and iv of Eutropius; Brittain, *Introduction to Caesar*, thirty chapters; Caesar's *Civil War*, three hundred lines. This was all read at sight.

Some of the schools which are using this method of teaching Latin complete the preparatory work in three years and read college authors in the fourth year. One high school read in the Senior year last year Vergil's *Aeneid*, Books iv, v, and vi; Tacitus' *Germania* and *Agricola*, and Terence' *Phormio*.

Reorganization along important lines is taking place in the mathematics of the secondary school. A great humanizing[1] process is under way. This change is manifesting itself along two lines: (1) The first line of readjustment relates to the content of the various mathematics courses and is taking the form of the evolution of a type of mathematics which will function in the life of the individual. (2) On the pedagogical side a great deal less emphasis is being placed on formal lesson-setting, lesson-hearing, and assignments for home study, and a great deal more upon efficient classroom instruction and greatly improved methods of study.

[1] Slaught, "The Training of the Teacher of Mathematics," an address.

The first step toward improving the mathematical situation in the high schools came as a result of the repudiation of the doctrine of formal discipline. Not many years ago courses in elementary algebra in the first year of the high school universally consisted of little but mere extensive formal manipulation of symbols and highly abstract and often complex processes, with very slight application to concrete problems. This highly abstract work upon which immature high-school boys and girls spent a year had no relation whatever to the experiences of life and was little else than an abstract science of numbers.[1] The average high-school Freshman is incapable of carrying on the severe abstract reasoning necessitated by the more difficult parts of algebra, and consequently algebra has led to more discouragement and withdrawals from school than almost any other subject. The lack of vital connection with life and the absence of any end of value made the whole process artificial in the extreme to the pupil. The barrenness and abstraction which have characterized algebra have also found their way into geometry. As taught in the past this subject has consisted of abstruse logic in the form of an abstract deductive science as remote as anything could be from the interests of adolescent boys and girls.

The situation has been greatly improved in recent years. In the first place, the aim of the first-year algebra is now more than ever before to train pupils in the solution of problems[2] by means of the equation, though this practice is by no means yet universal. The purpose is that the work shall be not demonstrational but concrete and shall avoid abstract formal manipulation. The best thought at the present time sanctions the introduction of only so much theory and formal manipulation as will give a mastery of the equation as a tool for problem-solving. The equation is introduced at the very first and a readjustment and rearrangement of material takes place throughout the course in order that it may be made use of in the widest manner in the solution of problems

[1] Brookman, "First Year High School Mathematics," *Teachers College Record*, X, 46–62.

[2] "Report of the Committee of the Central Association on Algebra in the Secondary Schools," *School Science and Mathematics*, November, 1907.

from the beginning. For example, quadratics are introduced very early in the course for the reason that thereby an entire new field is opened for problem work. A first-year course in algebra along these lines is concrete, is an interpretation of real life, begins with the interests and experiences of the pupils, and deals with real situations. The same intense interest and the same connection with life ought to be found in the algebra class as obtains in the class in cooking and the class in machine-shop practice. First-year algebra, according to the newer ideals, must be an instrument which can be used for a practical purpose in life and not a bundle of highly abstract theories. The recondite logic of the subject must be banished from the first year and the work made to center around the equation and the problem for practical purposes and rational ends.

The same idea holds in the reorganization of geometry. The central aim toward which we are working here is applied problems.[1] Gradually the content of the geometry course is being rebuilt and the shopwork in mechanic arts, some of the domestic-arts courses, the work in physics, and nearly all the vocations furnish many concrete problems. It is entirely possible that the truths of geometry may be developed thus in connection with the experiences of the pupils and come in concrete form from life instead of being handed down from the days of Greek philosophy in the form of organized logic suitable only for mature and mathematically inclined minds. The work of a few teachers here and there furnishes abundant proof that *applied problems* may be made the basis of the course in geometry and that around these the pupil may organize his knowledge and construct a science of geometry. It is easy to see in the present trend of thought here the complete reorganization of the content of geometry and the elimination from the second year of high school of the present course with its old Greek content and its difficult abstractions and emphasis on formal memory work.

Except for the few who are so constituted by nature that they have a natural bent for higher abstract mathematics, the algebra and geometry of the first two high-school years ought to be so

[1] Millis, "Real Problems in Geometry," *Teachers College Record*, X, 16–45.

reconstructed that those parts which are unrelated to the experiences of life should be eliminated. That is, there is a sufficient field of applied mathematics in which the pupil may with greater profit spend his time.[1] This idea has found concrete expression in the state in the complete abandonment of the formal courses in algebra and geometry in the curricula in agriculture, commerce, and domestic arts and the substitution of such courses as farm arithmetic, household arithmetic, and practical mathematics[2] in the attempt to develop a type of mathematics which will function in life. In a word, the mathematics situation is being rapidly reorganized in the state along the lines of the elimination of the traditional formal courses from all but the college-preparatory curricula and the substitution of courses in applied mathematics, as fast as they can be worked out in a systematic manner.

Another line of improvement in the mathematics situation in the college-preparatory curriculum is the concurrent teaching of algebra and geometry, which is a common practice now in the state. The main emphasis during the first year is on algebra, but a great deal of related geometry is taught. In the second year the work centers around geometry with the infusion of considerable associated algebra. Those parts of both subjects which are too formal and abstract for high-school pupils have been omitted. The whole subject has been made more concrete and practical, more problems are introduced, and the work is related in a more vital way to the experiences of life. Thus the subject is within the grasp of the average boy and girl, is intelligible, and has a meaning. The interweaving of algebra and geometry renders it possible for algebra to make geometry more intelligible and for geometry to illustrate the facts of algebra. The whole learning-process is made more rational and economic; the college-entrance requirements are fully met. The student does not drop his algebra at the end of the first year but his grasp on it continues to increase during the

[1] Morrison, "Reconstructed Mathematics in the High School," *Thirteenth Yearbook of the National Society for the Study of Education*, Part I, pp. 9–31.

[2] This is the name applied to a course in the agricultural curriculum which includes: (1) the algebra of the equation; (2) the applications of geometry to practical measurements; and (3) the elementary principles of surveying.

second year by constant use of it in expressing the facts of geometry; he is thus better prepared for work of an algebraic nature in the third or fourth year of his course.

The experience of a school in the state may serve to illustrate the advance which has taken place in the pedagogy of secondary mathematics. As in nearly all schools, it had been the custom in this school to assign a lesson in algebra from the textbook on one day and on the next to hear it recited. Becoming dissatisfied with the meager results obtained by this method of procedure, the books were taken away from the class and the recitation period devoted wholly to teaching and drill work alternated with recitations. The first step in teaching a principle was to draw from the class by questions any facts which they already knew which might serve as a basis for interpreting the new principle. In most cases this could be done in ten minutes. This is one of the most important steps in teaching. It is the process of bringing the mind of the pupil into a condition of apperceptive receptivity, as Hamilton terms it, so that it may have a body of related ideas with which to grasp, interpret, and assimilate the new principle. When this step was complete and the existing mental content of the pupils had been made available for interpreting the new idea, the teacher proceeded to give the class a brief, clear-cut, concise explanation of the process. It may be laid down as a principle that learning is always most economic and expeditious when the pupils' first view of a new subject comes from the teacher orally with abundant illustration and demonstration.[1] Three or four more examples were treated in this manner, after which the entire class was sent to the board for the rest of the period to solve examples dictated by the teacher. Sometimes ten or fifteen examples were placed on the board to be worked before the next period, but the reliance was largely on efficient instruction and effective drilling in the class period. On the day following the presentation of the principle, the books would be handed out and the class would work at their seats or at the blackboard on examples of the same kind, the teacher going among them, giving a suggestion here or a hint or a criticism there and keeping the class at work at concert pitch. Ordinarily

[1] W. H. Pyle, *Journal of Educational Psychology*, I, 475–76.

several days of work would follow in which the entire class would work at the board as the teacher dictated examples. Finally would come a day for recitation and for rounding up the whole matter. Now each pupil solved one or more examples at the board and explained them. Before the topic was left a thoroughgoing test was given on it, and if the class could show an average of 85 per cent or more a new topic was taken up. It was found that it was necessary for the pupils to do little or no home work in algebra. The important thing was the quality of the class instruction and the effectiveness of the drill.

A class of eighth-grade pupils was started in algebra at the beginning of the next year as an experiment and for the purpose of securing a comparison. The high-school class was taught this year by the traditional method of assigned lessons, home study, and hearing of recitations. The eighth-grade class devoted one twenty-five minute period a day to algebra, had no assigned lessons, no textbook study, and had textbooks in their hands only when they were doing examples at the board. The work was accomplished by skilful presentation of principles by the teacher along the lines previously indicated and by effective blackboard drill during the class period. The eighth-grade class covered during the year the same ground as the high-school class, and at the end of the year on the same examination, covering the work of the year, averaged about 10 per cent higher than the high-school class. The two classes were of approximately equal ability. The interest which the eighth grade manifested in the work was marked.

This description of the work of one school serves to illustrate the trend of affairs in the state, namely, to depend more and more upon a high quality of class instruction in mathematics rather than assigned lessons, home study, and formal recitations on what has been studied at home. In the best schools great emphasis is put upon efficient study in school. Several schools have rooms large enough to accommodate all the pupils in the school, which are used as study-rooms with a teacher always in charge. Those who have observed the work of these schools declare that one hour of study under these conditions which are most favorable to study is worth three of ordinary study at home.

READING FOR TEACHERS OF SEX HYGIENE

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It is the purpose of this discussion to direct attention to a single phase of the problem of sex hygiene: the adequate training for teachers who are to give the instruction. The importance of such training is obvious when one considers that the character of one's knowledge and the conditions under which it has been attained largely determine his emotional reaction to a situation; and the discernment of individual needs, while largely a matter of tact and insight, also depends in great measure upon a broad and sure knowledge of the facts involved in the type of situation confronting us. Hence the valuable thing for educators seems to be a restatement of the aims of sexual education, and the study of the available materials and methods by which those who are directly or indirectly responsible for sex instruction—whether parents, teachers, administrators, or religious and social workers—can attain a due preparedness to achieve these ends.

The positive aims of sexual education, on its more elemental side, are physical and biological. They look toward sound physique and function, normal marriage, and a reasonable number of healthy offspring. These are cardinal, and we do right to direct primary attention to them. But it is as great a mistake to suppose that they express the whole of sexual education, as to assume that preparation to earn a living is the whole of education in general. Primary sexual functioning, in man even more than in the lower animals, normally falls into a comparatively inconspicuous place among his life-activities. On the other hand, the range of secondary sexual activity has been immensely increased in man, and has tinged many other phases of life with such numerous and varied colors that we cannot ignore sex if we would. It is absurd to suppose that these are not fit subjects for the attention of education, since they so profoundly affect life. We do not hesitate to assign

as a part of the aims of sexual education that the youth shall learn the graces of social life in relation to sex; that fashion shall be sane and refined in its expression of the sex instinct; that the sexual element in recreation shall be spontaneous without excess or morbidity; that a sexual selection which makes for individual happiness and racial well-being shall be exercised under the protection of a trained capacity for the judgment of sexual charms; that the erethic glow of art and religion shall find a due appreciation, drawing warmth from sex and imparting control to it; and that the finer graces and essential chivalry of ethics shall find a congenial soil.

In the face of these positive aims, we cannot but see the purely incidental nature of the negative propaganda which has hitherto dominated. There is need of prophylactic teaching, of course. Unhygienic and vicious habits must be prevented. Premature and violent sexual stimulation must be avoided. The association of the obscene with sex must be forestalled. Inhibitions of modesty and chastity must be imposed upon the sexual impulse; but it cannot be too strongly emphasized that these inhibitions, as heretofore imparted to girls, have often been of a perniciously indiscriminate nature.

What we are advocating as sexual education is a far larger thing than teaching the avoidance of certain vices. It is a thing of rich emotional and cultural possibilities, and must be approached from many angles, with as large and comprehensive and constructive an ideal as possible. So far as explicit school courses are concerned, we do well to leave it an integral part of biology or physiology; provided only that this refusal of a special place to it be not construed into a tacit admission of its unimportance or impropriety, resulting in its total neglect. In the studies named, the tendency is steadily in the direction of a careful scientific training for the teacher. But it often happens that such instruction is needed in schools where there is no trained biologist; that the rural-school teacher, the minister, and above all the parent finds an occasion when there is need for individual advice or instruction, for which he feels his inadequacy; that the principal or superintendent has to judge of the fitness of material, method, or teacher for formal sex

instruction; or that a firm and sure knowledge of sex problems is required of some man as a leader in the community, irrespective of his professional function. It is such situations that require a sane and constructive and unshrinking concept of sex, which cannot be made to order. For the benefit of those who may face these problems, we venture to suggest a series of studies which we think will serve the double purpose of leading the student of them into an adequate view of sex, and of aiding in the evaluation of the immense mass of literature from which these titles are selected.

The mature and educated person who has not studied the subject at all will perhaps require to be awakened to the *need of sexual education*. A large part of the periodical literature of sex has had this purpose. It would be too much to say that this literature is unduly an alarmist; but at least it is likely to convey an excessive emphasis on the pathological side, shockingly prevalent as that is. Some typical titles are:

Addams, Jane. "A New Conscience and an Ancient Evil," *McClure's*, XXXVIII, 232–40. [This is one of a series, all valuable.]

Henderson, Charles Richmond. "Education with Reference to Sex," *Eighth Yearbook of the National Society for the Scientific Study of Education*. The University of Chicago Press, 1909. Pp. 74+89.

Morrow, Prince A. *Social Diseases and Marriage*. New York: Lea Bros. & Co., 1904.

This material, soundly scientific as it is, must be regarded as inadequate just in proportion to its ease of acquisition. It merely directs attention to the field, and is entirely useless unless followed up with a constructive type of knowledge.

For the child, the real foundation for sexual education is not to be found in any printed literature, but in the habit of regarding organic nature as one great realm of genesis and growth, none of whose secrets is necessarily locked to him. This attitude can be imparted to any child in the grades by the *teaching of elementary biological facts* frankly and without the prudish exclusion of human reproductive processes which too generally mars such teaching. Training of this kind will at least give a point of view to which leaders of public thought can afterward appeal when these children need specific sex instruction, or themselves become parents and are confronted with the problem of instructing their own

children. Material of this kind is discussed in the following literature:

Eddy, Walter H. "An Experiment in Teaching Sex Hygiene," *Jour. of Ed. Psy.*, II, 451–58.
Eliot, Charles W. "School Instruction in Sex Hygiene," *Proc. of 5th Cong. of Amer. School Hygiene Ass'n*, pp. 114–20. New York, 1911.
Foster, W. S. "School Instruction in Matters of Sex," *Jour. of Ed. Psy.*, II, 440–50.
Hall, G. Stanley. "The Needs and Methods of Educating Young People in the Hygiene of Sex," *Ped. Sem.*, XV, 82–91.
Henderson, C. R. *Op. cit.*
McIntire, Charles. *The Teaching of Hygiene through Domestic Science and Nature-Study.* Easton, Pa.: Amer. Acad. of Med.
Phelps, Jessie. "Biologic Teaching of Sex," *Amer. Ass'n for the Study and Prevention of Infant Mortality:* Trans. of First Annual Meeting, pp. 291–96. Baltimore, 1910.
Putnam, Helen C. "The Practicability of Instruction in the Physiology and Hygiene of Sex as Demonstrated in Several Public Schools," *Boston Med. and Surg. Jour.*, CLVI (1907), 132–37.
Putnam, Helen C. "Sex Instruction in High Schools," *Proc. of the Nat. Soc. for the Scientific Study of Education*, VIII (Part II), 76–82. (Bound with Henderson's monograph.)
Schmitt, Clara. "The Teaching of the Facts of Sex in the Public Schools," *Ped. Sem.*, XVII, 229–41.
Walter, H. S. "Biology and Sex Hygiene," *Educ.*, XXXII, 26–34.
Zenner, Philip. *Education in Sexual Physiology and Hygiene.* Cincinnati: The Robert Clarke Co., 1910. Pp. viii+126.

The teacher, however, in order to speak from adequate knowledge, must know not only pathological conditions and have the normal biological attitude toward sex. The specifically *human physiology of sex and reproduction* should be studied in some standard college textbook if the teacher has not already acquired the knowledge in class. There are excellent chapters on the reproductive system in the following:

Dearborn, George V. *A Textbook of Human Physiology.* New York: Lea & Febiger, 1908. Pp. 550.
Martin, H. Newell. *The Human Body.* New York: Henry Holt & Co. 9th Ed., 1910. Pp. xvii+546.

This material fits one to impart only physiological knowledge, and that not of a particularly intricate nature. On the other hand, even the special teacher of high-school biology may have had a training in which the functions of cell growth and reproduction

were stressed, while the part of bisexuality in organic life and in human society was not explicitly studied. To this training then should be added a study of the important *biological and anthropological aspects of sex*, such as are to be found in the following:

Darwin, Charles. *The Descent of Man, and Selection in Relation to Sex.* New York: Appleton, 1887. Pp. 688.
Ellis, Havelock. *Man and Woman.* New York: Scribner.
Geddes, Patrick, and Thompson, J. E. *The Evolution of Sex.* London: Scott. Rev. ed., 1901. Pp. xx+342.
Howard. *A History of Matrimonial Institutions.* Chicago: The University of Chicago Press. 3 vols.
Westermarck. *A History of Human Marriage.*
Westermarck. *The Origin and Development of the Moral Ideas.*

This stage of sex study, which may be regarded as the substance of that required by the college man or woman, should not be regarded as complete without some knowledge of the specifically *psychological problems of sex.* Those who are familiar with general psychology will find their point of departure in the place of instinct and emotion in human activity, as discussed by James (*Principles of Psychology*, chaps. xxiv and xxv), Dewey ("A Theory of Emotion," *Psy. Rev.*, I, 553–69; II, 13–32), Ribot (*The Psychology of the Emotions.* New York: Scribner), and McDougall (*Social Psychology.* Boston: Luce & Co.). The theory of emotion is well summarized by Angell (*Psychology*, chaps. xviii and xix).

In English, the best special treatments of sexual psychology at this level are the following:

Bell, Sanford. "A Preliminary Study of the Emotion of Love between the Sexes," *Amer. Jour. of Psy.*, XIII, 325–54.
Scott, Colin A. "Sex and Art," *Amer. Jour. of Psy.*, VII, 153–226.

The last-named is particularly full and illuminating. There would seem to be a gap in sex literature at this point, calling for a single volume of moderate size dealing with the psychology of sex and summarizing the valid and important conclusions of these, and of more elaborate studies to be mentioned presently. It does not appear either that the significant phenomena recorded by Bell on the question of so-called romantic love have attracted the further investigation which they deserve. No phenomena of human psychology are of greater value and significance for the emotional life of the individual and few touch more closely the fundamental

bonds of society; and yet none has received less intelligent treatment at the hands even of those scientists who have deigned to notice them at all. The question deserves a critical study, to ascertain the meaning of love in terms of biology and anthropology, and to free it from the vaporings of an overdone romanticism.

The teacher who has to deal largely with the matter will need to be familiar also with the *general views of the sex problem* arising out of the large experience of eminent physicians and scholars. Three such have come to us from the German; one is English. They are:

Bloch, Ivan. *The Sexual Life of Our Times.*
Ellis, Havelock. *Studies in the Psychology of Sex*, Vol. VI (cited below).
Forel, A. *The Sexual Question.* New York: Rebman Co., 1908. Pp. xv+536.
Moll, Albert. *The Sexual Life of the Child.* New York: Macmillan, 1912. Pp. xv+339. $1.75.

The writer has not had the privilege of seeing Bloch's work. Forel's is a standard. Moll has dealt with a most important phase of the problem in a way which is invaluable to the teacher, if he possesses the larger view of sex to which the course of reading here suggested is intended to lead. Before undertaking any of these volumes the student should be sure that he can assimilate the pathological sources which they use.

At this stage of study the teacher should be prepared to evaluate independently the flood of books intended to convey *sex instruction for the untrained.* Generally speaking, these books are makeshifts. The best of them are of the class issued by the American Society of Sanitary and Moral Prophylaxis. There are a number of books for young people which are reasonably free from objection, such as the following:

Educational Pamphlets of the American Society of Sanitary and Moral Prophylaxis. New York: Lea Bros. & Co.
No. 1. *The Young Man Problem.*
No. 2. *Instruction in the Physiology and Psychology of Sex.* (For teachers.)
No. 3. *The Relations of Social Diseases with Marriage, and Their Prophylaxis.*
No. 4. *The Boy Problem.* (For parents and teachers.)
No. 5. *How My Uncle the Doctor Instructed Me in Matters of Sex.* (From the German.)
No. 6. *Health and the Hygiene of Sex.* (For college students.)

Morley, Margaret. *Life and Love.* Chicago: McClurg, 1895. Pp. 214. $1.25.

Morley, Margaret. *A Song of Life.* Chicago: McClurg, 1891. Pp. 155. $1.25.

Wilder, Burt G. *What Young People Should Know.* (Well and copiously illustrated.)

There are admirable summaries and criticisms of such material in the following:

Barnes, Earl. "Books and Pamphlets Intended to Give Sex Information," *Studies in Education* (Stanford University, 1897), II, 301–8.

Henderson, C. H. *Op. cit.*

Parkinson, William D. "Sex and Education," *Ed. Rev.*, XLI, 42–59.

"Some Recent Literature on Sex Education and Sex Hygiene," *Jour. of Ed. Psy.*, II, 464–70.

The objection to the literature criticized in the last four titles is that it singles out sex and centers attention upon it. The true attitude is summed up admirably by Parkinson. A wholesome view of sex makes it an integral part of life, so that specific instruction need not come with an air of constraint.

The last volume of Ellis' great work has already been cited as in the same class with those of Bloch, Forel, and Moll. As a whole, however, we may cite it as constituting the next higher phase of the subject, namely, the *exhaustive study of the entire problem from the sources.* It is a work beyond the needs of the ordinary teacher, and attains a minuteness of analysis that is only excelled in the *monographs* which deal at first hand with the specialist's phases of the subject. Ellis' work is:

Ellis, Havelock. *Studies in the Psychology of Sex,* Philadelphia: F. A. Davis & Co. 6 vols.

In conclusion, we may be permitted to say from personal experience that sex instruction is neither so easy as some enthusiasts would have us believe, nor so impossible as would appear to the apprehensive conventionality of those whose lips have always been sealed to the subject. It should not be attempted, except in emergency, without a definite and sure knowledge beyond that which is to be imparted. This knowledge, in our opinion, need not be that of the biological specialist, but only the acquaintance which every educated person is presumed to have with the fundamentals of biology.

AGENCIES, METHODS, MATERIALS, AND IDEALS OF SEX EDUCATION

WILLIAM TRUFANT FOSTER
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The present social emergency is not concerned merely with diseases, or physiology, or laws, or wages, or suffrage, or recreation, or education, or religion. All of these phases of the present situation, and many others, must be taken into account in our attempted solution of the problem of sex hygiene and morals. A person who believes that he can offer a quick and certain way out of our difficulties appears to have no comprehension of the problem. This much, however, is certain: the greatest need is public education. The policy of silence has failed. Accurate and widespread knowledge is a necessary condition of progress, whatever may be the chosen direction. The main questions at issue concern the agencies, methods, materials, and ideals of sex education.[1] The following propositions are intended as a brief summary of the most important truths concerning each of those four aspects.

I. AGENCIES

1. As there are but few parents who can and will give the necessary instruction, it must be given by other agencies, at least until a new generation of parents has been prepared to meet this responsibility.

2. Although the failure of parents calls for the immediate action of other agencies, the instruction should be so conducted as to break down barriers of false modesty and establish confidence between parents and children.[2]

3. As the public school is the only agency that reaches nearly all of the children of the nation, sex instruction must eventually be

[1] The best expression of the concensus of opinion of those who should know most about the subject is the *Report of the Special Committee on the Matter and Methods of Sex Education*, issued by the American Federation for Sex Hygiene, New York, December, 1912.

[2] *Sex Education*, by Ira S. Wile, M.S., M.D., New York, 1912, aims to assist parents to banish the difficulties and to suggest a course of instruction. It is a brief and wholly admirable treatise.

given in all public schools; only thus can we bring forward a new generation of parents, equipped with the knowledge and desire to do their duty by their children.

4. As a majority of our boys and girls do not enter high schools, some instruction in matters of sex should be given in grammar schools.

5. No community should introduce direct sex education into the schools as a part of the curriculum until it has informed parents, cultivated favorable public opinion, and obtained the services of teachers who are qualified for the work by nature and by special preparation.

6. All normal schools and all college departments of education should at once embody in their courses for teachers instruction in the matter and methods of sex education, and adequate instruction should be provided for teachers now in service; and within a reasonable time after such opportunities have been offered in a given state, certificates to teach in that state should be granted only to those who have had the prescribed preparation.

7. As there are not now enough public-school teachers prepared to teach sex hygiene, such teaching must be done in part, at least for many years, by private agencies.

8. Lectures should be arranged for parents by churches, schools, colleges, clubs, granges, boards of health, and other organizations; but no one should be accepted as a lecturer until he is approved by a board of health, social hygiene society, college, or other organization which is unquestionably competent to pass judgment on the qualifications of the speaker.

9. Since there are adults in every community that will not be reached, even when sex education becomes a part of the day-school curriculum, such instruction should be offered in continuation schools, in social settlements, in the Young Men's Christian Association, in college-extension courses, in factories, stores, lumber camps, car shops, indeed, wherever the happy connection can be made between those who need the help and those who are surely qualified to give help.[1]

[1] *Progress*, the second annual report of the Oregon Social Hygiene Society, gives some account of the most extensive public education that has been conducted in this country.

II. METHODS

1. Sex instruction as a rule should not be isolated; it should not be prominent; it should be an integral part of courses in biology, hygiene, and ethics. "Specialists" in sex education are undesirable as teachers of boys and girls, in or out of school.

2. As there is a discrepancy between the age of puberty and the age of marriage, due to artificial conditions of modern society, it is important that sex consciousness and sex curiosity should develop slowly: accordingly, sex instruction, unlike instruction in other subjects, must seek to satisfy rather than to stimulate interest in the subject; questions must be answered truthfully, but the answers must not lead the curiosity of the child beyond the information that is immediately necessary for the guidance of his own conduct.

3. The aims of sex education can be fully attained only by the encouragement of every means for keeping the mind occupied throughout waking hours with wholesome thoughts and the body sufficiently active in vigorous work and play, preferably out of doors.

4. Lectures and class instruction should be provided only for carefully selected groups: almost nothing can be gained, and much may be lost, by presenting the subject before miscellaneous audiences.

5. At every age, in every class, there are likely to be individuals who need certain instruction not needed by the entire class: such instruction should be given privately.

6. Books dealing directly with human sex life should not be given to children before the age of puberty; some of the books most widely used are dangerous; instruction should come directly from parent or teacher.

7. Traveling exhibits, made up of concrete and vivid materials, and prepared with due consideration of all the accepted principles of sex education, may be used effectively and inexpensively to bring the truths before many thousands of adults in many places.[1]

[1] The exhibit of the Oregon Social Hygiene Society has been seen by over 50,000 people, at a total cost of less than two cents for each person.

8. Against commercialized prostitution, the educational campaign should be one of pitiless publicity: the public should know the names of all persons engaged in promoting the business, whether they are prostitutes (including female *and male*) or liquor dealers, owners of houses, owners of real estate, lessees, proprietors, financial backers, policemen, or politicians; they do not thrive in the light; their connection with the traffic should be proclaimed by means as effective as the "tinplate" signs for disorderly houses.

9. Reliable investigations should be made further to reveal the relationships between sexual immorality and venereal diseases, on the one hand, and, on the other hand, ignorance, low wages, injurious clothing, lack of wholesome amusements, low dance halls, grills, moving picture houses, vaudeville shows and so-called legitimate theaters, mental deficiency, armies and navies, and—most important of all—the liquor traffic: and the outcome of such investigations should be made known through persistent campaigns of public education.

10. The findings—though not the details—of every vice commission and of every other dependable investigation must be kept before the public, until the truth is common knowledge that segregation never segregates, that safeguarding clinics never safeguard, that medical control never controls, that official protection of immorality increases immorality, and that, if there be any such things as a necessary evil, it is not the shameless partnership of government and vice.

III. MATERIALS

1. Elementary nature-study for children and biological study for boys and girls of high-school age may lead gradually and safely to the teaching of plant and animal reproduction, provided that the subject is not left on the plane of animal life: it is a mistake to suppose that the teaching of biology necessarily promotes right conduct in matters of sex.

2. Subordinate and incidental to instruction in normal sex processes, warning should be given of the dangers of individual vice, illicit sexual intercourse, and venereal diseases: but such instruction should be given only to groups that are homogeneous

in respect to sex, physiological age, and social environment, or preferably, to individuals.[1]

3. As sex instruction for young people has none but practical aims, hygienic and moral, only such knowledge concerning sex processes, reproduction, and diseases should be given at each period as is necessary for the welfare of the individual at that period.

4. The practice of masturbation is sufficiently common among both boys and girls to call for warnings to all children at the earliest ages: any teacher or parent should be qualified to help in individual cases.

5. The education of adolescent boys must stress the six great truths that will fortify them against the main arguments of the enemies of decency and health:

(1) Sexual intercourse is not a physiological necessity: continence was never known to impair physical or mental vigor.

(2) There can be but one standard of chastity; the purity that a man demands for his sister he must achieve for himself.

(3) Seminal emissions are natural among healthy men: usually they need cause no concern.

(4) Gonorrhoea is a terrible disease, with tragic consequences that one can never fully foretell; syphillis is worse.

(5) Every woman who offers her body for prostitution is, sooner or later, a probable source of contagion: clean living is the only positive safeguard against venereal disease.

(6) Nearly every "advertising specialist" is a criminal of the most contemptible type; the only safe adviser is the doctor in reputable standing who is not afraid to sign his name to his prescription or to his advice.

IV. IDEALS

1. "The function of education is to guide the intellect into a knowledge of right and wrong, to supply motives for right conduct, and to furnish occasions by which alone can moral habits be cultivated" (Drummond).

[1] See *American Youth*, New York, April, 1913 (Sex Education number). An article by George W. Hinckley tells of the ideal way in which he gives individual instruction to his boys at Good Will Farm, Hinckley, Maine.

2. The first aim of sex education is necessarily to bring about an open-minded, serious, if possible, a reverend, attitude toward sex and motherhood, in place of the traditional secrecy and vulgarity; a teacher who cannot do this should do nothing.[1]

3. Instruction concerning venereal diseases which leaves the impression that the chief danger of illicit intercourse is "getting caught," should not be tolerated. Knowledge of facts, though scientifically accurate, is not necessarily protection to the individual or to society.

4. In so far as the sex life of animals is made the basis of instruction, the *difference* between man and the lower animals is the point to emphasize; otherwise the facts of animal life may appear to justify irresponsible sex activities, whereas the glory of man is his control over animal instincts.

5. Since it is not ignorance of what is right, but rather the will to do the right, that is usually responsible for sexual delinquency among adults, the program of public education must include more effective moral education in all grades of all schools: every subject, properly taught, is a means of cultivating will power, of strengthening character, but the school curriculum is now made to yield but a small part of its possibilities.

6. The appeal must be made to self-respect and to chivalry; especially through history and literature, the idea of sex must be spiritualized; the right education of the emotions is fundamental.[2]

7. Through the study of heredity and eugenics, the social responsibility of the individual may be made to serve as a higher incentive for right conduct than the fear of disease.

8. If there is one truth of sex education that needs emphasis above all others, it is that any plan for meeting the social emergency that would relax the control of moral and spiritual law over sex impulses is antagonistic not only to physical health but as well to the highest development of personality and to the progressive evolution of human society.

[1] "Sex-Instruction as a Phase of Social Education," in *Religious Education*, 1913, by Maurice A. Bigelow, is one of the best articles on this subject.

[2] F. W. Roerster, *Marriage and the Sex Problem*, Stokes Co., New York. No book on this subject has reached a higher plane of idealism. At the same time it is scientifically sound.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

THE RICHMOND MEETINGS

The Department of Superintendence of the National Education Association, together with its sixteen affiliated societies, met in Richmond, Virginia, February 23–28. The more important affiliated organizations are the National Council of Education, the National Society for the Study of Education, and the Society of the College Teachers of Education.

Concerning the Philadelphia meetings of 1913 the *School Review* commented upon the scientific spirit of the discussions, marking a great advance upon the informal inspirational programs of a few years ago. Educational processes, agencies, products are being measured, are being standardized with recognized units of exact valuations. In Richmond this spirit of scientific investigation was even more marked. Here and there an address of the older type was heard, but the audiences invariably expressed their disapproval of unsupported opinions and assertions. The profession in the future will listen only to the man who talks from facts.

Types of Leadership

In the meetings of the Department two distinct types of leadership were manifest. David Snedden, commissioner of education of Massachusetts, was the most prominent leader of that sentiment which stands for the extreme in educational innovations. His advocacy of a separate system of administration for vocational and industrial education, however, did not receive warm approbation from the rank and file of superintendents in the field. The other type of leadership, voiced very effectively on one occasion by William C. Bagley, of Illinois, while admitting the imperative necessity of vocational education, insisted that it ought to be instituted as an integral part of the present system, insisted also that the vocational can be articulated with the cultural under the present administrative agencies, and vigorously protested against any attempt to belittle the place of liberal studies. This position met with the hearty approval of a large majority in the convention.

The College Teachers of Education

The Society of the College Teachers of Education listened to a report on "The Rating, Placing and Promotion of Teachers," by a committee, Frank E. Thompson, University of Colorado, chairman. Data based upon careful investigation disclose the following facts: teachers are in large numbers inexperienced young women; their preparation is inadequate; their tenure of one position is very brief; under the promptings of bureaus they change very often, usually to positions but little if any better than the ones they leave; large numbers of men desert the profession because there is little hope of promotion; petty gossip in small towns drives many young women out of the profession; and, finally, a very large percentage begin their work in conditions under which they cannot possibly succeed. The committee asserted that one-half of the effort of training teachers is lost in bad placing in the original positions.

The Society recognized that the problem is one of the most vital of the day. Even more important than supervision, administration, courses of study, is the individual teacher in her classroom. No theorizing, no practical efforts from above will be able to offset inefficiency in the teaching force. Under this conviction the Society continued the committee another year, its special duty being to suggest remedies for: (1) the poor method of securing schools for beginning teachers; (2) the poor method of promoting; (3) what was termed "the temperamental way" of rating teachers. Hope for better conditions in the future seems to lie in the closer study of individuals as fitted for special positions, in the elimination of the commercial teachers' agencies, and in substituting for them state agencies which can co-operate in a sensible and sympathetic relationship.

Rural School Administration

The radical changes necessary in rural school administration were outlined in a joint paper by Ellwood P. Cubberley, of Leland Stanford Junior University, and E. C. Elliott, of the University of Wisconsin:

> If our rural and small village schools are again to occupy a vital place in our national life and minister to the real needs of rural life, they must be fundamentally reorganized and redirected, making of them new rural institutions adapted to modern needs. This will involve a county unit of organization, administration and finances; the election of a lay county board of education, analogous to a city board of education, to select the experts and to determine the larger questions of policy and procedure; the substitution of an appointed

for an elected superintendent, and the reorganization of the county administrative office along the lines of the best city administrative experience; a redirection of the instruction to meet modern educational needs; and the training of a body of teachers for rural work, who can and will render community, as well as educational, service.

Sex Hygiene

The Department of Superintendence went on record upon this mooted issue, in the following resolution:

Resolved, That we recognize fully the importance of the proper teaching of sex hygiene, but that we believe the ideal place for giving such instruction to be the home; that we believe the school should be willing and anxious to help the home in this matter as best it can, if instruction in sex hygiene is to be given in school by teachers specially qualified for such work.

The original resolution favored instruction to individuals, not to classes. Mrs. Young, supported by President Pearce, of Milwaukee Normal, carried the amendment, which leaves the method of teaching to the judgment of the school authorities.

Dr. Devine's Address

One of the most notable addresses was presented by Edward A. Devine, director of the New York School of Philanthropy. Speaking at the opening session of the Convention, he said in part:

If we agree that neither public relief nor voluntary charity, however necessary and valuable they are, had any potency in itself for the abolition of poverty, we are driven a step further to an analysis of its causes, to the discovery of its tap root cause—if we can find that—if there is any such thing. . . . . Poverty is due to the exploitation of the exploitable; the underpay of those who can be underpaid; the overwork of those who do not know how to secure leisure; the lack of protection of the subnormal; the cultivation for commercial profit of vicious habits, of depraved appetites, of human weaknesses; the play of unrestrained greed upon individuals who do not have resisting power as individuals and whose combined latent resisting power, in the form of social control, has never been brought into effective counterplay.

The school itself is the natural organizer of the knowledge which it imparts. Or rather the imparting of knowledge and its application to social ends should not be two processes, but one. If the organization of knowledge for the common good does not take place coincidentally with its acquisition, it does not take place at all, or at least only painfully and at excessive cost. The assumption of social responsibility for poverty, disease, and crime clearly involves the transformation of the school into the foremost instrument of social economy. This is not merely to tack a new label on an institution already sufficiently

belabeled. On the contrary, it means something. And what it means is, first, a different training of teachers; second, a new curriculum, and, third, more vital and diversified contracts between the school and the adult community.

It is fortunate that our generation is inclining to formulate the task of education largely in economic terms, in terms of earning and spending, of productive efficiency and standards of living. Those are no ignoble or purely materialistic terms. It is a misinterpretation of this tendency to say that it is for the advantage of industry.

The demand is made not in the interests of industry, but in the name and in the interests of education. If we can increase by 50 per cent the earning capacity of the boy who enters industry, we shall make him relatively independent of his employer. If he becomes worth $9 a week at the start—instead of $6—to industry, he becomes by the same educational process worth $12 a week to himself. I am far from suggesting that earning capacity at the moment of leaving school is the only or even the best test of the efficiency of the schools, but it is a very definite test, and one from which the exponents of modern ideas in education should not shrink. Men and women who are fit to do the work of the world, and keen to appreciate in due proportions the fruits of industry, capable workers and discriminating ultimate consumers, producers of wealth—i.e., of well-being and rational users of wealth—these are the goal of education as the social economist would formulate it, asking from the schools not everything, but a generous slice of that large everything of which social welfare consists.

Society of College Teachers of Education

Account of the Richmond Meeting

Two sessions and a luncheon were held at Richmond on Tuesday, February 24. The program as printed in the *Yearbook* was rendered. Sixty-four members were present at the luncheon.

The Committee on Rating, Placing, and Promotion of Teachers was continued and instructed to report next year.

The chairman of the Committee on Normal Schools made an informal report. The committee thought it best to make a survey of all the agencies for training teachers, covering three years. The first year should be devoted to departments of education in colleges and universities; the second to normal schools and their relations to these departments; the third to high schools. The committee was instructed to start on this survey and to report at the next meeting. It was also instructed to co-operate with a committee of the Normal School Association if possible. Professors Judd and Elliott requested the committee in its first year of work to consider the forms of entrance and credits allowed

normal-school graduates in the departments of education in colleges and universities.

On motion of Professor Judd, the Executive Committee was instructed to appoint a committee of five to be known as the School Survey Committee. The function of this committee is to co-ordinate as far as possible the activities of the various college and university departments of education, as related to school surveys.

On motion of Professor Hanus the Executive Committee was instructed to consider and report to the Society upon the matter of establishing a committee on grievances. It would be the function of such committee to investigate and report upon the removal without cause of a member from his professional position.

The invitation of the Panama-Pacific International Exposition to meet at San Francisco in 1915 was referred to the Executive Committee with instructions to consider it, but to arrange a meeting with the Department of Superintendence if possible.

TREASURER'S REPORT

Receipts:			
Cash on hand from last accounting (February 20, 1913)		$ 50.66	
Collected on 1912 dues		4.45	
Collected on 1913 dues		80.35	
Collected on 1914 dues		282.50	
Cash by error		3.89	
			$423.85
Expenditures:			
University of Chicago Press subscriptions		$284.92	
Secretary's expenses—			
Stamps	$ 9.00		
Printing	18.25		
Telegrams	2.59		
Refunds to members	3.50		
1913 luncheon	2.00		
Rubber stamps	2.65		
Bibliography 1914 *Yearbook*	15.00		
		$ 52.99	
			$337.91
Cash on hand			$ 85.94
Dues unpaid but "good" (about)			20.00
			$105.94
Outstanding bills (about)			35.00
Potential balance			$ 70.94

OFFICERS FOR 1914–15

President, W. W. Charters, Dean of the School of Education, University of Missouri.

Secretary-Treasurer, Carter Alexander, Professor of School Administration, George Peabody College for Teachers.

Executive Committee: the President and Secretary, *ex officio;* Paul Monroe, Professor of History of Education, Columbia University; F. E. Thompson, Professor of Education, University of Colorado; W. A. Jessup, Dean of the School of Education, Iowa State University.

COMMITTEES FOR 1914–15

Committee on Rating, Placing, and Promotion of Teachers:

L. D. Coffman, University of Illinois.
E. P. Cubberley, Leland Stanford Junior University.
E. C. Elliott, University of Wisconsin.
George F. James, University of Minnesota.
William H. Kilpatrick, Columbia University.
W. S. Sutton, University of Texas.
F. E. Thompson, University of Colorado, *chairman.*
A. S. Whitney, University of Michigan.

Committee on Rating of Normal Schools in Relation to Departments of Education in Colleges and Universities:

Carter Alexander, George Peabody College for Teachers.
F. E. Bolton, State University of Washington.
J. J. Doster, University of Alabama.
W. A. Jessup, Iowa State University, *chairman.*
Charles H. Johnston, University of Illinois.
W. C. Ruediger, George Washington University.
G. D. Strayer, Columbia University.
Harlan Updegraff, University of Pennsylvania.

Committee on School Surveys:

M. B. Hillegas, Columbia University.
A. J. Inglis, Rutgers College.
C. H. Judd, University of Chicago.
H. W. Josselys, University of Kansas.
E. C. Moore, Harvard University, *chairman.*

NEW MEMBERS

(Those added since the list published in the February *School Review*)

Baker, Leonard, Professor of Education, University of South Carolina, Columbia, S.C.

Carter, R. E., Professor of Educational Psychology, University of Kansas, Lawrence, Kan.

Childs, H. G., Professor of Administration and Secondary Education, Indiana University, Bloomington, Ind.
Gray, C. T., University of Texas, Austin, Tex.
Haggerty, M. E., Professor of Educational Psychology, Indiana University, Bloomington, Ind.
Hill, Joseph H., Professor of Education, Boston University, Boston, Mass.
Holton, E. L., Professor of Education, Kansas Agricultural College, Manhattan, Kan.
Kemp, W. W., Professor of Education, University of Montana, Missoula, Mont.
McMurray, Frank, Professor of Elementary Education, Columbia University.
Mead, A. R., Professor of Education, De Pauw University, Greencastle, Ind.
Messenger, F. J., Professor of Education, University of Vermont, Burlington, Vt.
Phelan, W. W., Director of School of Education, University of Oklahoma, Norman, Okla.
Wallin, J. E., Professor of Clinical Psychology and Special Education, University of Pittsburgh, Pittsburgh, Pa.
Wilson, G. M., Professor of Education and Director of the Summer Session, Iowa State College, Ames, Iowa.

CARTER ALEXANDER
Secretary, College Teachers of Education

GEORGE PEABODY COLLEGE FOR TEACHERS
NASHVILLE, TENNESSEE

DEVELOPMENTS IN CHICAGO

Superintendent Young has succeeded in establishing a new course of study in the Chicago high schools. Hereafter pupils will have twenty-six recitations a week during the first year, twenty-one during the second, and seventeen in the third and fourth. The new course requires fifteen units for graduation. The number of hours spent on "fundamentals," English, history, science, and mathematics, is increased from four to five a week. Four-year courses in architecture, liberal arts, accounting, mechanical drawing, household arts, and commercial branches are added. Two-year courses are offered in pattern-making, machine-shop work, electricity, printing, and office preparation. These two-year courses are given in the third and fourth years following the two years of general work. The six-hour high-school day has thus come to Chicago. It is accompanied by 10 per cent increase in salary granted to the teachers whose work time is thus extended.

This proposal of the superintendent was adopted by the Board of Education with but two dissenting votes. However, by a tie vote, nine to nine, the Board defeated recommendations for a new course in the

elementary schools. This course had been prepared by Mrs. Young, the district superintendents, principals, and teachers of the elementary schools. The reason given for the action of the Board is that the proposed course has "too many fads and fancies," one member declaring, "I don't believe in sacrificing reading, writing, and arithmetic for bead-working and sewing." This criticism appears to be entirely unjust. Mrs. Young is reported to have said, "the fight is against me, not against the course of study." The schools of Chicago are to be congratulated that the Board of Education revised its ill-considered action and by a vote of 14 to 2 adopted the entire program for the elementary schools.

Meanwhile, it may be noted that the inferior court has decided in favor of the ousted members of the Board in the *quo warranto* proceedings. Judge Foell asserts that the mayor in accepting resignations from the trustees at the time of their appointment was acting against public policy and, in effect, depriving them of the independence of action contemplated in the law. The two principal points upon which Judge Foell ruled were these: first, the Supreme Court has held that the mayor is given only the power to appoint members of the school board, not to remove; second, that the mayor cannot do indirectly what he is not given the direct power to do; the holding of resignations over the heads of his appointees virtually gives him the power of removal.

Meeting of the Illinois Schoolmasters' Club

The February meeting of the Illinois Schoolmasters' Club (President, Director T. C. Burgess, Bradley Institute, Peoria) was held at Decatur, February 13 and 14. At the Friday evening session, after the usual banquet, an address was given by President W. P. Morgan, of Macomb Normal, on the topic, "Correlation of Grades Made by High-School Students, and What They Mean from the Standpoint of College Entrance." Elaborate statistics were presented showing the relative standing of high-school students through the four years and also in the first year of college, with the conclusion that a student's record in the fourth year of his high-school course may be safely taken as a basis for college entrance. The fourth year is as good evidence of fitness to go on with college work as the record of the third year is for admission to the fourth. Such a means of determining fitness is fairer than an examination given by the college. A careful record of each student, both relative and absolute, in high school and in the first year of college work, may serve also as a basis for testing and classifying high schools.

At the Saturday morning session Superintendent Smith, of Peoria, presented in some detail newer phases of educational work which are being tried by the school board of that city, particularly special classes and teachers for defectives, a visiting nurse to look after general health, and a savings bank system.

Superintendent Englemann, of Decatur, discussed the question, "Does Our Organization of the Public School Need Changing from an 8–4 to a Different Basis?" The advantages which would come from a grouping of the first six grades, the seventh and eighth grades and the first two years of the high school, the last two years of the high school and the first two years of college were fully stated. In the smaller towns the division would necessarily be 6–3–3. In discussion Professor C. H. Johnston, of the University of Illinois, presented the evidence of the successful working of this new arrangement in many towns and cities from Maine to California.

"Recognition of Scholarship" was the title of a suggestive paper by Principal T. J. McCormack, of La Salle. It was a plea for a public opinion—a school atmosphere—which would bestow as prompt and inspiring recognition upon scholarship as is now the case upon other activities.

A Departure in Educational Exhibits

Mr. Barr, director of education at the Panama-Pacific Exposition, is maturing plans which can hardly fail to be of genuine interest to educational people everywhere. In past expositions the educational exhibits have been made by various towns, cities, countries, and states without any regard to one another. The city of New York, for instance, exhibited what it considered to be its best work. The cities of Boston, Buffalo, Chicago, Los Angeles, and many others did the same thing, even if they duplicated practically everything found in the New York exhibit. There was little or no effort made in past expositions to present a really practical exhibit of the best work to be found anywhere in the world, and to avoid wearisome duplication. But Mr. Barr proposes to follow a different plan in the exhibit at San Francisco. He and his assistants will look over the world and find out where the best work in manual training, for instance, is being done, and they will have this work displayed in such a manner that anyone interested in it may easily receive help from it. No other town, city, state, or country will make an exhibit of manual training, because the best exhibit that can be made has been secured. Mr. Barr and his colleagues will go through every

phase of school work, and try to find out where it is being done in the most effective way. The exhibit will be made from that place. If this plan is fully realized, as it doubtless will be, the educational exhibits will show in an orderly, systematized way, without repetition, the most instructive educational work which is going forward anywhere in the world today. A teacher, then, may without confusion or fatigue study the exhibits with a view to informing himself regarding the present status of the work in any subject or field in which he is interested. There can be no rivalry between different localities or institutions to attract attention to themselves. No exhibits will be made for mere advertising purposes, which has been the chief consideration in the exhibits in past expositions.

An educational exposition worked out on this plan cannot fail to exert a tremendous influence for good on teaching in this country.

M. V. O'SHEA

FREE TEXTBOOKS

California has had the experience of one year under the free-textbooks law. The system was put in operation January 1, 1913. During the year the state has furnished and distributed approximately 1,500,000 books, costing the state $316,000. It has been asserted that the cost per pupil for books during the entire year was less than 80 cents, and that the people of California have been saved $500,000. This last estimate is based upon prices which would have been paid for books as catalogued by general publishing firms.

This experiment in California is being watched very closely by several other states. Nebraska, Wyoming, Colorado, Minnesota, Pennsylvania, and others already have free textbooks. Kentucky passed a law for uniform texts on February 4. Naturally the step from state-wide uniformity in textbooks to state publishing is but a short one. Kansas seems to be following in the footsteps of California, and Iowa, Georgia, Kentucky, Minnesota, and Washington are strongly agitating the question.

Among the advantages that may be gained by state printing and distribution are the following: (1) under proper management, a saving of at least of 50 per cent in the cost of books; (2) ease in securing desirable uniformity throughout the state; (3) frequent changes, highly undesirable, are less likely; (4) freedom from the constant strife and agitation stirred up by competing book firms (in Tennessee the governor has seen fit in appointing the new textbook commission to warn his

appointees against the wiles of book agents); (5) the adaptation of books to local needs (the Kansas Commission, asserting that the illustrations of farm life in most texts are mere caricatures, has hired an artist to draw sixty pictures of real farm life for new primers); (6) the money expended for books stays within the state, with the exception perhaps of royalties paid to authors.

Promiscuous Changing of Textbooks

Ohio is experiencing heavy expense and inconvenience caused by the inadequate textbook regulations. The present law provides that school books shall be adopted and contracts let for a period of five years; any school board, however, by a vote of five-sixths of its members, may cancel the contracts and adopt new books at any regular meeting. Under this latter provision, according to widespread complaint throughout the state, the book concerns have been able to nullify the five-year contracts in many cities. The mixing in local school politics of outsiders with books to sell, however good the books may be, has become exasperating to many school authorities.

Bad as the present system in Ohio is, it is to be seriously questioned whether the Thomas bill, proposed in the legislature, is any improvement. The bill provides that no textbook now in use shall be changed prior to 1919, and that every five years thereafter textbooks shall be adopted for five-year periods, no change being permitted within the prescribed period. The objection to this law is that it may fasten inferior books upon the schools for nearly a whole school generation. Indeed, rigid state-wide uniformity of any kind may seriously be questioned. Any suitable law ought to make provision for at least a reasonable range of selection by various localities. In this matter, again, California seems to have suggested a method of procedure. Let a state prescribe and publish uniform textbooks with reasonable opportunity for selection by local authorities; let the law go into operation with regard to a few subjects at a time. In this way the immediate burden upon the state may be made light, flexible courses of study be maintained, and the irritating persistence of book exploiters be avoided.

A Plea for a State University in New Hampshire

Superintendent Henry C. Morrison, of New Hampshire, in a recent address before the Merrimack Valley Teachers' Association made a vigorous plea for a state university in New Hampshire. His argument

is based upon the assertion that the New England Association of Colleges is to all intents an educational trust, dictating the educational policy of the whole of New England and that a state university is necessary to round out a system of education adapted to the needs of the state. After naming the sixteen colleges which are represented on the New England College Entrance Board, Mr. Morrison continues:

> This Board determines for itself what constitutes the proper teaching force, program of study and equipment for a secondary school, and it measures according to its own standards the efficiency of all public schools which desire to send students upon certificate to any of the colleges having membership in the Board. It is essentially an application of the trust principle in education. . . . . The Board has of late been following out the natural course of evolution of the industrial trusts by compelling small institutions to come within its memberships for self-protection.

Mr. Morrison then cites as evidence of what he thinks is the autocratic and high-handed domination of the College Entrance Board, the case of the Dover high school which was last year summarily dropped from schools on the accredited list. He says:

> During the last year this school sent 67 students to colleges, thirteen of them represented on the New England Board. Of this number four have failed. Sixty-three students did not fail and in many cases they are reported by the colleges as having done high-grade work. . . . . The Dover authorities might readily recover their position in the good graces of these people if they were willing that the teaching force should devote its main attention to cramming the pitifully small percentage of students who ever go to any of these colleges, to such an extent as to make the students capable of automatically getting by the first semester of indifferent or mediocre teaching in college. . . . . The principal of a high school recently said to me: "Two of the members of my faculty practically devote all their interests for four long years to the two or three children of well-to-do families who may possibly go to some college represented on the New England College Entrance Board."

The real keynote of Superintendent Morrison's argument lies in the contention that the Entrance Board exerts undue influence on the curriculum:

> Every school which introduces a curriculum dealing with the practical concerns of everyday life does so in the full assurance that students electing that curriculum can go no farther, can find no outlet to any higher institution. . . . . In many of our communities you can begin to detect the influence of the New England Board at about the sixth grade. Teachers are beginning there to look out for the standard which the high school must maintain, as the high school in its turn must look out for this college standard. It is building

from the top down instead of from the bottom up. I believe therefore that I am well within the truth when I say that public education in the New England states today is dominated by an irresponsible body of men of whose existence the great mass of our people are ignorant.

Basing his conviction on these two contentions, that the New England Board is arrogant in its judgment of the merits of high schools, and that the pressure of the Board is noticeable throughout all the secondary-school and part of the elementary-school activities, Mr. Morrison pleads for a state institution that shall serve New Hampshire as the University of Maine and the various state universities of the West are serving their states. These institutions he asserts have frankly recognized

> that the high school should adapt itself to the work done by the lower schools for the great mass of the population, and that the colleges in their turn should adapt their work to what the high school has done. So only can we build for ourselves an educational system which shall be both rational and democratic. . . . . We need an institution in which there shall be a place for every boy and girl who is able to make his way in college and which shall never dare to raise any artificial and arbitrary obstacles in the pathway of education. . . . . I believe that the natural solution of the problem and indeed the only solution is the development of a true state university in our midst.

This powerful arraignment of college domination is significant, coming from the chief educational officer of New Hampshire, under whose leadership the secondary schools have made such radical progress. Assistant Superintendent H. A. Brown, in the March and April numbers of the *School Review*, has set forth clearly the earnest endeavor that the leaders of education in New Hampshire are making to bring the elementary and secondary schools into direct and vital connection with the life of the state. It is more than an endeavor. The changes have been actually accomplished. With some distaste, even the state universities are coming to recognize that they must loosen their hold on the secondary schools, and yield to the constant and increasing demand for the recognition of subjects not formerly accredited for college entrance. The nation-wide insistence that the high school shall become "the people's college" is bound to be realized; it is right that the interests of the majority should always be given earnest consideration, and usually preference.

The domination of secondary education by colleges like those of the New England Board has been of incalculable benefit during the last fifty years. On the whole their influence has been conservative, though many of the innovations that have recently come into secondary education have had their inception in college and university circles. Today

there is a new group of leaders, of whom Superintendent Morrison is one, who see that the vast body of the people must be helped in the schools for their everyday life. Under such leadership, the secondary-school curriculum has expanded and now includes many subjects that the conservative colleges hesitate to accept for entrance requirements.

Proper articulation between the high school and the college is complicated in New England as elsewhere by many difficulties, of which two may be noted here. First, the curriculum of the secondary schools can be expanded very much more readily than the curriculum of most colleges. While the schools of New Hampshire and other states have been grouping their work in highly specialized courses, the majority of the colleges of the New England Association remain relatively small institutions with few instructors and few courses. It is hardly to be expected that a College Association can give entrance credit for a very large number of courses, if the majority of the colleges are unable to carry those courses farther. It may be remarked too that the college authorities are better able than the secondary-school officers to determine what school subjects are in line with the few advanced courses which the colleges are able to offer. For example, very few of the New England colleges are equipped to carry farther students who have specialized in the Curriculum of Manual Arts (the New Hampshire curriculum is described on p. 236 of this issue of the *School Review*). That being the case, the Association is justified in refusing entrance credit, except to highly technical colleges, for many of the subjects in the Curriculum of Manual Arts.

The proper articulation of college and secondary school is difficult also because the college in its organization and courses aims to act as a selective agency, while the high school as a public institution cannot turn away any serious students who are seeking a preparation for practical life. Rightly or wrongly the college today aims to make short work of dropping students if they are incompetent, however painstaking and faithful their efforts may be; the college feels that it is not justified in giving its stamp of approval to incompetents. This being the case, in all justice to students seeking to enter, the college is under obligation to maintain a high standard of entrance requirements. A college which deliberately accepts students who are poorly prepared, only to drop them after a trial which is doomed from the beginning to be a failure, is to be unsparingly condemned. Contrast with this selective process, which the colleges are endeavoring to maintain, the duty of a school system like that of New Hampshire. In the public schools a pupil has a right

to remain even to the end, however mediocre his work may be, if he is doing the best work of which he is capable. However, it by no means follows that because he remains to the end in a school which does not aim to be selective, he is thereby fitted to enter a higher school which is attempting to be highly selective.

The high school of the past has been trying to fit a few of its students for college and to fit the large majority for practical life. It has attempted to put both groups through the same courses of study. Hope in the future seems to lie in just such changes as Superintendent Morrison has instituted, namely, variety in the high-school curriculum. If a boy elects the New Hampshire Curriculum in Mechanical Arts, he may be preparing for work at the end of his high-school course; he may at the same time leave open the possibility of securing entrance credit for the Dartmouth Engineering School. If another lad finishes the Curriculum in Agriculture, he may go to work or he may be given full entrance credit for the agricultural course in Cornell. If a girl completes the Curriculum of Domestic Science, she may become a housekeeper or she may deserve full entrance credit for a specialized course in Simmons College. It is quite possible that each of these young people is entitled to full entrance credit for advanced college work in the special line for which his high-school work has prepared him; it is quite possible, yes, even probable, that none of these young people is entitled to a blanket entrance credit for any and all college courses. What seems to be needed, then, is the hearty co-operation of the colleges and the secondary schools in an endeavor to agree upon entrance credits on a basis of co-ordinating the students' special activities in the high school with the same or similar interests in the higher institution. It may be remarked in parenthesis that the new courses in New Hampshire do not seem to have suffered from any undue influence of college-entrance boards.

BOOK REVIEWS

Grundfragen der Schulorganisation. Eine Sammlung von Reden, Aufsätzen und Organisationsbeispielen. Von GEORG KERSCHENSTEINER. Dritte, verbesserte Auflage. Leipzig und Berlin: B. G. Teubner, 1912. Pp. vi+338. M. 4.20.

The years that have passed since the first edition of this valuable work appeared in 1907 have brought the author, Dr. Kerschensteiner, to an influence in American education enjoyed by few men. As yet, however, he is best known for his continuation schools, and only a few realize the scope of his educational undertakings. The reader of the *Grundfragen* has an opportunity to learn of this wider range, covering elementary and higher schools, but always centering in *Produktive Arbeit.*

Reviews of the former editions and of other of the author's works will be found in previous numbers of the *School Review.*

The new edition differs from the second in the inclusion of an additional address "Landwirtschaftlicher Beruf und Staatsbürgerliche Erziehung," and in bringing up to date, especially in the notes, the account of the school affairs of Munich in which there is so widespread an interest.

FRANK A. MANNY

BALTIMORE TEACHERS TRAINING SCHOOL

Studies in Literature. By FREDERICK M. TISDEL. New York: Macmillan, 1913. Pp. ix+333. $0.90 net.

Mr. Tisdel states in his preface that this book for secondary schools is "a guide to the study of the classics read in these schools and required for admission to college in English," to supplement, and not to supplant, the notes of annotated texts.

The book is divided into two parts. Part I takes up six literary types, giving to the history and characterization of each a page or two of discussion, and then proceeding to the analysis of several examples of the type by means of questions, comments, suggested reading, and suggested topics for reports. Part II consists of a brief summary of English literature by periods, from the Old English Period to the Victorian Era.

The virtue of the book lies chiefly in Part I. The definition accorded each type, though brief, is yet both vivid and accurate. The comments and questions on each work are notably definite, comprehensive, and stimulating. Particularly commendable is the immediacy of impression the author obtains through the connection he establishes between the type or particular work

and life in general; this is conspicuously true in his treatment of "The Public Address," and should help to vitalize for the high-school student the antipathetic "Speech on Conciliation." Again, though he deals adequately with material and purpose in every case, Mr. Tisdel does not neglect the study of technique. Time and again he questions, "What method is used?" and diverts the inexperienced from an absorption in merely appreciative criticism.

Part II, which offers a survey of the seven great periods of English literature in 171 pages, is less successful. We are inclined to question somewhat the properties of a work of this sort which devotes more space to the Middle English period than to any other literary epoch. We question, also, the value of any discussion of such writers as Otway, Etheredge, Wycherley, Robert Burton, Sir Thomas Browne, and the poets of the metaphysical school, since it has been possible to give only a page and a half each to Thackeray, George Eliot, Stevenson, and Shelley. And finally, we regret that the author feels forced to substitute for his interpretative use of the Socratic method, meager summaries of such works as *The Canterbury Tales* and *The Faerie Queene*. When he allows himself to be specific, Mr. Tisdel is vivid, interesting, and helpful; when he resorts to encyclopedic generalizations, he, like many another, is of minimum value.

The book contains sixteen interesting full-page illustrations and a selected bibliography, with prices suited to the needs of a working library for the study of English in high school.

HELEN SARD HUGHES

WELLESLEY COLLEGE

Essentials of Physics. By GEORGE A. HOADLEY. New York: American Book Co., 1913. Pp. 550. $1.25.

The revision of the author's *Elements of Physics* will be stimulating alike to teacher and pupil. The instructor who prefers to select illustrative material from the facts of everyday life will find this book well adapted to his purposes. The diagrams are admirably executed and significant, and the press work leaves nothing to be desired. Several paragraphs have been rewritten; others have been amplified to discuss many of the commercial applications of the principles of physics.

The chapters are arranged as follows: Introductory; The Properties of Matter; The Mechanics of Solids; Liquids; Gases; Sound; Heat; Magnetism; Electricity; Light; and Invisible Radiations. A useful set of conversion factors and a summary of the important formulas of elementary physics are given at the end of the book.

The full-page illustrations include, among others, the remarkable photographs of sound waves obtained by Professor Arthur L. Foley and Mr. W. H. Souder; the Wireless Station, Wellfleet, Mass.; moving-picture films; an

electric locomotive; section views of the automobile; a vacuum cleaning system; an aeroplane; Zeppelin airships; Gatun Upper Locks, Panama Canal; and the electric generators at Niagara Falls.

E. E. GLENN

GARY, INDIANA

Chemistry and Its Relations to Daily Life. By LOUIS KAHLENBERG and EDWIN B. HART. New York: Macmillan, 1913. Pp. 375; 109 figures.

This book is intended for a text for students of agriculture and home economics in secondary schools. The authors have as their aim "to make the subject-matter thoroughly practical in character and to present it in an interesting and simple way." Of the whole work, 320 pages are devoted to the text proper; 55 pages of directions for 152 practical laboratory experiments and a list of apparatus and chemicals necessary for the course follow the text proper.

The first eleven chapters follow along the lines usually recognized by the elementary treatises on chemistry. But 7 pages of fundamental considerations introduce the student to the study of water and its purification. Especial emphasis to the industrial aspects of the science leaves little time and space to principles. No attention is given to the elementary theories. It is evidently the purpose of the authors to give facts instead of principles. No attempt is made to explain the conditions under which chemical reactions take place. However, formulas and equations are numerous throughout the book. This is especially true of the chapter on carbon, where many rational formulas of complex organic compounds are introduced. The empirical method of the presentation of an enormous number of facts which makes for memory rather than inductive development (upon which greater structures can be built) furnishes the chief ground for criticism of this volume.

The second part of the book deals with such applied subjects as: Rubber; Paints, Oils, and Varnishes; The Soil; Fertilizers; Plant Food; Animal Food; Human Food; Milk; Farm and Orchard Pests. The last 9 chapters were written primarily for the student of agriculture. This portion of the text represents the result of excellent discrimination and judgment in the choice of facts that are sure to be of great value to the boy and girl on the farm. If the student can master the necessary fundamentals of the science through the first part, this book should find its place as a text in the high schools of the country and of the smaller towns. For college preparatory courses it will be a valuable reference book. As a whole there is too much for one year's work.

CHARLES J. PIEPER

UNIVERSITY HIGH SCHOOL

Plane Geometry. By WALTER BURTON FORD and CHARLES AMMERMAN. Edited by E. R. HEDRICK. New York: Macmillan, 1913. Pp. 213+xxxi. Cloth, $0.80.

Teachers will welcome this book as another addition to that small but growing group of textbooks on geometry that have deviated decidedly from the traditional, old-fashioned textbooks, both in the character of their content and in the manner of the presentation of the subject to the pupil. This book does not go so far in some things as some other books of this group do. It contains a modest number of practical problems. Many teachers will wish that there were more of these. The number of theorems is somewhat less than in the older books. The formal geometry is preceded by an introduction, consisting of 34 pages, which presents the fundamental notions of geometry, shows a number of the constructions of geometrical figures with the straight-edge and compasses, and assumes some of the simpler theorems, such as that all straight angles are equal, etc. Although most of the proofs are given in full, in some the reasons for steps are omitted, and in a few the entire proof is left to the pupil. Incommensurable cases are given, but with suggestions that they may be omitted. The trigonometric ratios are introduced in connection with proportion in similar triangles.

JAMES F. MILLIS

FRANCIS W. PARKER SCHOOL
CHICAGO, ILL.

The School System of Norway. By DAVID ALLEN ANDERSON. Boston: Richard G. Badger, The Gorham Press, 1913. Pp. 232. $1.25.

At the present time when our school system is being scrutinized so carefully, any study which enables us to consider our organization in a comparative way is desirable. Heretofore very little has been generally known concerning the Scandinavian school systems. This has been true largely because the Scandinavian countries are not in the most usual routes of European travel and because the languages are not so well known as the German and the French. Undoubtedly the schools of Norway and Sweden furnish most valuable object-lessons to the rest of the world. Judging from Dr. Anderson's book, few countries are more eager for the benefits of education than Norway. Through their system of common schools, technical schools, normal schools, and universities, they have secured a degree of educational adjustment not surpassed by any other country. Norway has furnished a great many illustrious statesmen, scientists, and literary masters, and is also a country abounding in men of a high type of valor, physical prowess, honesty, and industry, and consequently the educational ideals and practices which prevail there should be worthy of most careful consideration. Heretofore only fragmentary accounts of Norway's educational system have been available in the English language. At the writer's suggestion, Mr. Anderson made a trip abroad for the purpose

of studying the system at first hand. His intimate acquaintance with the language was a prime essential in acquiring an understanding through observation and reading. That he has made an accurate interpretation is attested by the Foreword by one of Norway's eminent scholars, and that he has made an interesting account will be conceded by all who peruse the pages. The writer of the Foreword, Dr. Otto Anderssen, is principal of the Pedagogical Seminary affiliated with the University of Christiania. He makes the following statement: "I have, with great pleasure, read through Mr. David A. Anderson's presentation of Norway's school system and found it in all essentials correct, complete, and illuminating. Through personal observation, conversation with competent men, and study of the most important literature, the author has succeeded in getting a clear and exact view of the Norwegian school methods and characteristic forms of work in their historical development and present condition. His reflections and judgments testify to pedagogical insight and independence of views."

The book contains four chapters, each with several subdivisions. The introductory chapter contains a brief sketch of the history of Norway, the statement of some national characteristics and ideals, a brief consideration of the distribution of schools and pupils, the organization of the schools in relation to the state, commune, and city, and a statement of some of the general features of the inner organization of the schools.

Chap. ii is an intensive study of the teaching staff. In it there is a consideration of the qualification and certification of teachers, the training of teachers, their official titles, their tenure of office, and salaries.

Chap. iii discusses the courses of study in the state schools. Attention is first paid to the rise and development of the present form of the curriculum. Then follows a discussion of the primary school, the middle school, and the gymnasium, with the courses of study in each.

Chap. iv is devoted to interpretative conclusions. In this chapter characteristic topics deal with the relation of the schools to the ideals of the people.

FREDERICK E. BOLTEN

UNIVERSITY OF WASHINGTON

Mechanical Drafting. By H. W. MILLER, M.E. Peoria, Ill.: The Manual Arts Press, 1913. Pp. 219.

This volume was prepared by the author to supply his students with the information formerly presented in his class lectures. The material has been well chosen and forms an excellent course in general engineering drafting. It preserves a desirable balance between theory and practice and gives the student much useful information which does not come, necessarily, within the scope of mere drafting.

The extent to which the book may be used as a text by others will depend largely upon their agreement with the author as to the selection of his material.

It may be questioned whether the information, the line of progression, or the methods of presenting the theory are those which would appeal to instructors in high schools. If the book were to be used for such schools, one might wish that more attention had been given to the conventions of the working drawing and that radically different methods had been employed in presenting the subjects of orthographic projection and perspective.

FRANK M. LEAVITT

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Materials and Methods in High School Agriculture. By WILLIAM G. HUMMEL. New York: Macmillan, 1913. Pp. xv+385. $1.25.

Mr. Hummel has collected and prepared material relating to the work of high-school agriculture and arranged it in a book of 375 pages. In this text he treats the following topics: A Historical Sketch of the Development of Secondary Agriculture; Reasons for Introducing Courses in Agriculture into the Public Schools; The Character of the Curriculum; Teaching Methods and Textbooks; General Equipment; A General Discussion of the Character of the First Year's Work; Live-Stock Development; Dairy Husbandry; Poultry; Horticulture; The Fourth Year of the High-School Course consisting of Farm Mechanics and Farm Management; The School Farm; The Training of the Teacher and the Characteristics of the Successful Teacher of Agriculture. In these chapters Mr. Hummel describes concisely and at the same time very clearly the general characteristics of the methods and material to be used in teaching agriculture in secondary schools. He approves of such work in the public high school, and also shows that a limited number of special secondary schools in a state may be advisable.

In connection with the curriculum he presents a very excellent collection of the courses presented in secondary schools in different parts of our country, thus giving a very broad view of the general character of the work being done.

The statements he makes in regard to methods are well chosen, but it is probable that he overemphasizes the lack of proper textbooks. Within the past two years a considerable number of very excellent texts have been placed on the market, and while it is true that these are not, perhaps, of the highest possible standard, yet they are serving the purpose very well indeed.

It might have been well, in the chapter on Equipment, if a minimum list of general apparatus had been presented.

The bibliography of reference books and helps is very excellent.

The general treatment of the subject of live stock, poultry, and dairying is very good. The only criticism to be made is that a wrong idea in regard to the quantity of work in the subject of dairying may be conveyed by the book. The course outlined could be used in a special secondary school, but is probably too elaborate for the ordinary public high school.

His description of the fourth-year work in the agricultural course is one of the strongest features of the book.

This work constitutes a very valuable contribution on the subject of secondary agriculture. It is well adapted as a textbook for students preparing themselves to teach agriculture. In fact it is the only book yet prepared dealing directly with the teaching and laboratory problems in connection with this subject. Mr. Hummel is to be congratulated on the completeness of the work, as well as upon the general character of the subject-matter.

W. H. FRENCH

MICHIGAN AGRICULTURAL COLLEGE

Elements of Economics. With Special Reference to American Conditions, for the Use of High Schools. By HENRY REED BURCH and SCOTT NEARING. New York: Macmillan, 1913. $1.00.

The reviewer knows of no textbook in economics better adapted for the use of high schools than the above. In teaching a subject one of the first objects both in time and in importance is the creation of interest on the part of the student. Especially is this true of such a subject as economics which is of vast human interest and importance and yet is not so definite and conclusive in its results as the physical sciences. Burch and Nearing's text is notable because of the prominence given to a description of American economic conditions of the present day. Interesting chapters are given to wages and the standard of living, land reclamation, soil fertility, forest resources, water resources, and business organization.

Roughly put, the first half of the text is given to descriptive economics, the latter half to economic theory. Economics is defined as the science of human welfare rather than the science of wealth, and this conception of its scope and purpose is really maintained throughout the book and not merely stated in a formal definition.

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ENGLISH GRAMMAR AND COMPOSITION

High School English: Book Two. By A. R. BRUBAKER and DOROTHY E. SNYDER. New York: Charles E. Merrill Co. Pp. 374. $1.00.

This text is constructed on the traditional order, proceeding from words, sentences, and paragraphs to narration, description, exposition, and argumentation. Interesting chapters on criticism, literary forms, figures of speech, prosody, conversations about books, follow. Four useful appendices are added, on grammar, capitalization and punctuation, letter-writing, and sentences for correction. The text is suitable for third and fourth years of the high school.

Advanced English Grammar (1912 new edition). By WILLIAM T. HARRIS. Yonkers-on-Hudson, N.Y.: World Book Co. Pp. 511.

A most thorough and systematic advanced text. It is based upon the inductive method, definitions in all cases following concrete examples. The study of grammar outlined is very intensive and is suitable only for advanced classes.

An Advanced English Grammar. By GEORGE LYMAN KITTREDGE and FRANK EDGAR FARLEY. Boston: Ginn & Co. Pp. iii+333.

Also intended for advanced students, the main body of the book is preceded, however, by a short review chapter covering the principles learned in elementary courses. The text attempts "to afford the means for continuous and systematic study" of grammar, and to be "useful for reference in connection with the study of composition and literature."

English Composition in Theory and Practice (revised edition). By HENRY SEIDEL CANBY and OTHERS. New York: Macmillan. Pp. v+465. $1.25.

An admirable text for college classes. Exposition is given the place of greatest prominence because the power to explain clearly is of primary importance. Very logically, the whole composition, the paragraph, and the sentence are discussed in relation to exposition. The text covers also the other forms of discourse, is based on the inductive method, and contains much valuable illustrative material.

Elements of Debating. By LEVERETT S. LYON. Chicago: The University of Chicago Press. Pp. vii+136. $1.00.

This text is suitable for high-school classes in debating. It reduces to very simple form the principles usually amplified in more advanced texts. The attention of students is held constantly on their own observation and their own thinking. The "Test of Experience" fundamental for all effective expression is always emphasized.

A Handbook of English for Beginners. By WILBUR OWEN LYPHERD. Chicago: Scott, Foresman & Co. Pp. 314.

This text is frankly based on the failure of the usual college composition course when given to technical students. The author rightly believes that engineering students ought to have a special course in composition, in which the work is to be definitely connected with the practice of the profession, thereby contributing directly to their practical efficiency. The book also attempts to be serviceable to engineers already engaged in the profession. It is full of models of business letters, reports, articles for journals.

BOOKS RECEIVED

ENGLISH

Boughton, Willis. Tennyson's Idylls of the Kings, Selections. Boston: Ginn & Co., 1914. Pp. xlvi+185. $0.30.

Damon, Lindsay Todd. The Spy. Chicago: Scott, Foresman & Co., 1914. Pp. viii+458. $0.40.

Dorey, J. Milnor. Eliot: The Mill on the Floss. Boston: Ginn & Co. Pp. xxxii+554. $0.50.

Franklin, William Suddards. Bill's School and Mine. South Bethlehem, Pa.: Franklin, MacNutt & Charles, 1913. Pp. vii+98. $0.50.

Fuess, Claude M. Selected English Letters. Boston: Houghton Mifflin Co., 1914. Pp. ix+115. $0.25.

Gayley, Charles Mills. Beaumont, the Dramatist. New York: The Century Company, 1914. Pp. 445. $2.00.

Payne, Leonidas Warren, Jr. Southern Literary Readings. Chicago: Rand McNally & Co., 1914. Pp. xiv+487. $0.75.

Trent, W. P., and Erskine, John. Poems of Wordsworth, Shelley and Keats. Pp. xxxiii+120. $0.25.

Tucker, Louise Emery. Readings from the Old Testament. New York: Sturgis & Walton Co., 1913. Pp. 260. $1.25.

Tucker, Louise Emery. The Old Testament Phrase Book. New York: Sturgis & Walton Co., 1913. Pp. 148. $1.00.

LANGUAGES

Collitz, Klara Hechtenberg. Selections from Classical German Literature. New York: Oxford University Press, 1914. Pp. xv+666. $1.50.

Galpin, Stanley L. Balzac: Le Curé de Village. New York: Oxford University Press, American Branch. Pp. xviii+365. $0.75.

Goebel, Marie. Rosegger: Das Holzknechthaus. New York: Oxford University Press, 1914. Pp. xi+65. $0.35.

Murray, Augustus Taber. The Anabasis of Xenophon. Chicago: Scott, Foresman & Co., 1914. Pp. lii+460. $1.60.

Oliver, Thomas Edward. Le Bourgeois Gentilhomme. Boston: Ginn & Co., 1913. Pp. xxxv+180. $0.40.

Pardoe, R. H. Feuilles de Route 1870 par Paul Deroulede. Oxford: The Clarendon Press, 1913. Pp. 111. $0.40.

Philip, A. G. Marie-Claire à Villevieille. New York: Oxford University Press, 1913. Pp. 110. $0.40.

Scherer, Peter, and Dirks, Louis. Deutsche Lieder. New York: American Book Co., 1914. Pp. 110. $0.25.

EDUCATION

Elson, William H. Primary School Reader. Book III. Chicago: Scott, Foresman & Co., 1913. Pp. 287. $0.45.

Payne, Leonidas Warren (ed.). Southern Literary Readings. Chicago: Rand McNally & Co., 1913. Pp. 485. $0.75.

Journal of Proceedings and Addresses of the Fifty-First Annual Meeting of the National Education Association of the United States. Ann Arbor, Mich.: Published by the Association. Pp. xi+827.

Morgan, Barbara Spofford. The Backward Child. New York: G. P. Putnam's Sons, 1914. Pp. xvii+263. $1.25.

Sill, Ruth Penfield. Teachers College Bulletin: Elementary Clothing and Handwork. New York: Teachers College, 1913. Pp. 15. $0.10.

Thirteenth Annual Report of the Director of Education. Manila: Bureau of Printing, 1913. Pp. 149.

Thwing, Charles Franklin. The American College. New York: The Platt & Peck Co., 1914. Pp. 294. $2.00.

VanArsdale, May B. Teachers College Bulletin: Some Attempts to Standardize Oven Temperatures for Cookery Processes. New York: Teachers College, 1913. Pp. 15. $0.10.

Zeigler, Dr. Theobald. Allgemeine Pädogogik. Berlin: B. G. Teubner, 1914. Pp. iv+159. M. 1.25.

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Childs, Mary Louise. Actual Government in Illinois. New York: The Century Co., 1914. Pp. 224. $0.50.

Durell, Fletcher. Durell's Algebra. New York: Charles E. Merrill Co., 1914. Pp. 393 (Book One).

Forman, S. E. Advanced American History. New York: The Century Co., 1914. Pp. xiv+634. $1.50.

James, James Alton. Readings in American History. New York: Charles Scribner's Sons, 1913. Pp. xiii+584.

Stetson, Augusta E. Reminiscences, Sermons, and Correspondence Proving Adherence to the Principle of Christian Science as Taught by Mary Baker G. Eddy. New York: G. P. Putnam's Sons, 1913. Pp. 1200. $1.00.

Wood, T. B. The Story of a Loaf of Bread. Cambridge University Press, 1913. Pp. vi+140. $0.40 net.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN
Librarian, School of Education, University of Chicago

Adler, Martha. Mental tests used as a basis for the classification of school children. J. of Educa. Psychol. 5:22–28. (Ja. '14.)

Allen, William H. Two New York health universities. R. of Rs. 49:317–20. (Mr. '14.)

Atherton, Lewis. Literary selections most frequently memorized in the elementary schools. El. School T. 14:208–20. (Ja. '14.)

Ballard, P. B. Prose preference of school children. J. of Educa. Psychol. 5:10–21. (Ja. '14.)

Barnes, Earl. Comparison of Froebelian and Montessori methods and principles. Train. School M. (N.J.) 10:145–48. (Fe. '14.)

Benson, A. C. The influence of the older universities on the curricula of secondary schools. School W. 16:45–48. (Fe. '14.)

Brown, Elmer Ellsworth. Educational interests at Washington. Science 39:239–46. (13 Fe. '14.)

Bunker, Frank F. The better articulation of the parts of the public school system. Educa. R. 47:249–68. (Mr. '14.)

Bush, Arthur Dermont. Binet-Simon tests of a thirty-nine months old child. Psychol. Clinic 7:250–57. (Fe. '14.)

Butler, Nicholas Murray. Academic freedom. Educa. R. 47:291–94. (Mr. '14.)

Campbell, Everett Eveleth. A study of retardation and class standing on the basis of home language used by pupils. El. School T. 14:264–82. (Fe. '14.)

Davison, John. A teacher-training experiment evolved by the school authorities of Lima, Ohio. El. School T. 14:237–39. (Ja. 14.)

Dewey, John. Rousseau, Pestalozzi, Froebel, and Montessori. Kind. M. 26:186. (Mr. '14.)

Dunn, Arthur Wallace. Military camps for college students. R. of Rs. 49:321–26. (Mr. '14.)

Eliot, Charles W. Present problems of education. Educa. R. 47:237–48. (Mr. '14.)

[1] *Abbreviations.*—Atlan., Atlantic Monthly; Educa. Bi-mo., Educational Bimonthly; Educa. R., Educational Review; El. School T., Elementary School Teacher; English J., English Journal; J. of Educa. Psychol., Journal of Educational Psychology; Kind. M., Kindergarten Magazine; Outl., Outlook; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; Relig. Educa., Religious Education; R. of Rs., Review of Reviews; School W., School World; Sci. Am. Sup., Scientific American Supplement; Train. School M. (N.J.), Training School Magazine (New Jersey).

Harkness, Mary Leal. The education of the girl. Atlan. 113:324–30. (Mr. '14.)
Heck, William H. A third study of mental fatigue in relation to the daily school program. Psychol. Clinic 7:258–60. (Fe. '14.)
Henmon, V. A. C. Retardation, acceleration, and class standing. El. School T. 14:283–94. (Fe. '14.)
Hinkle, E. E. Experiments for efficiency in arithmetic, the Courtis tests. Educa. Bi-mo. 8:189–201. (Fe. '14.)
Keltie, J. Scott. Thirty years' progress in geographical education. School W. 16:53–55. (Fe. '14.)
Keyes, Rowena Keith. How we use our school library. English J. 3:86–93. (Fe. '14.)
Lyon, Darwin Oliver. The relation of length of material to the time taken for learning and the optimum distribution of time. J. of Educa. Psychol. 5:1–9. (Ja. '14.)
Mathews, John L. Dynamic education. Harper 128:616–25. (Mr. '14.)
Vocational and industrial training in Germany.
Otis, Alvah T. The appreciation and management of high-school debate. English J. 3:94–98. (Fe. '14.)
Peck, R. C. A home geography lesson for a city school. El. School T. 14:240–41. (Ja. '14.)
Roberts, William M. The development of part-time education for apprentices in Chicago. Educa. Bi-mo. 8:215–26. (Fe. '14.)
Sadler, M. E. Thoughts on present discontents in English education. School W. 16:42–44. (Fe. '14.)
(A) school in a prison. Outl. 106:288–89. (7 Fe. '14.)
Simpson, R. M. Addresses by citizens to school boys. El. School T. 14: 221–36. (Ja. '14.)
Stevenson, O. J. The old and the new in literature teaching. English J. 3:69–77. (Fe. '14.)
Terman, Lewis M. The effects of school life upon the nutritive processes, health and the composition of the blood. Pop. Sci. Mo. 84:257–64. (Mr. '14.)
Todd, John B. Fresh air in schoolrooms. Sci. Am. Sup. 77:118–19. (21 Fe. '14.)
Tooke, Frances E. Relations among the staff in secondary schools. School W. 16:58–60. (Fe. '14.)
West, Andrew F. Greek at Princeton. Educa. R. 47:279–90. (Mr. '14.)
Williams, A. M. Philosophy and education. Educa. R. 47:269–78. (Mr. '14.)
Wilson, Woodrow. The object of the college. Relig. Educa. 9:1–3. (Fe. '14.)
Witmer, Lightner. The scope of education as a university department. Psychol. Clinic 7:237–49. (Fe. '14.)
Wolfe, A. B. Tests of college efficiency. Educa. R. 47:217–36. (Mr. '14.)
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